TMC

INTERNET TELEPHONY®

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Rich Tehrani on how VoIP fuels Cisco's growth

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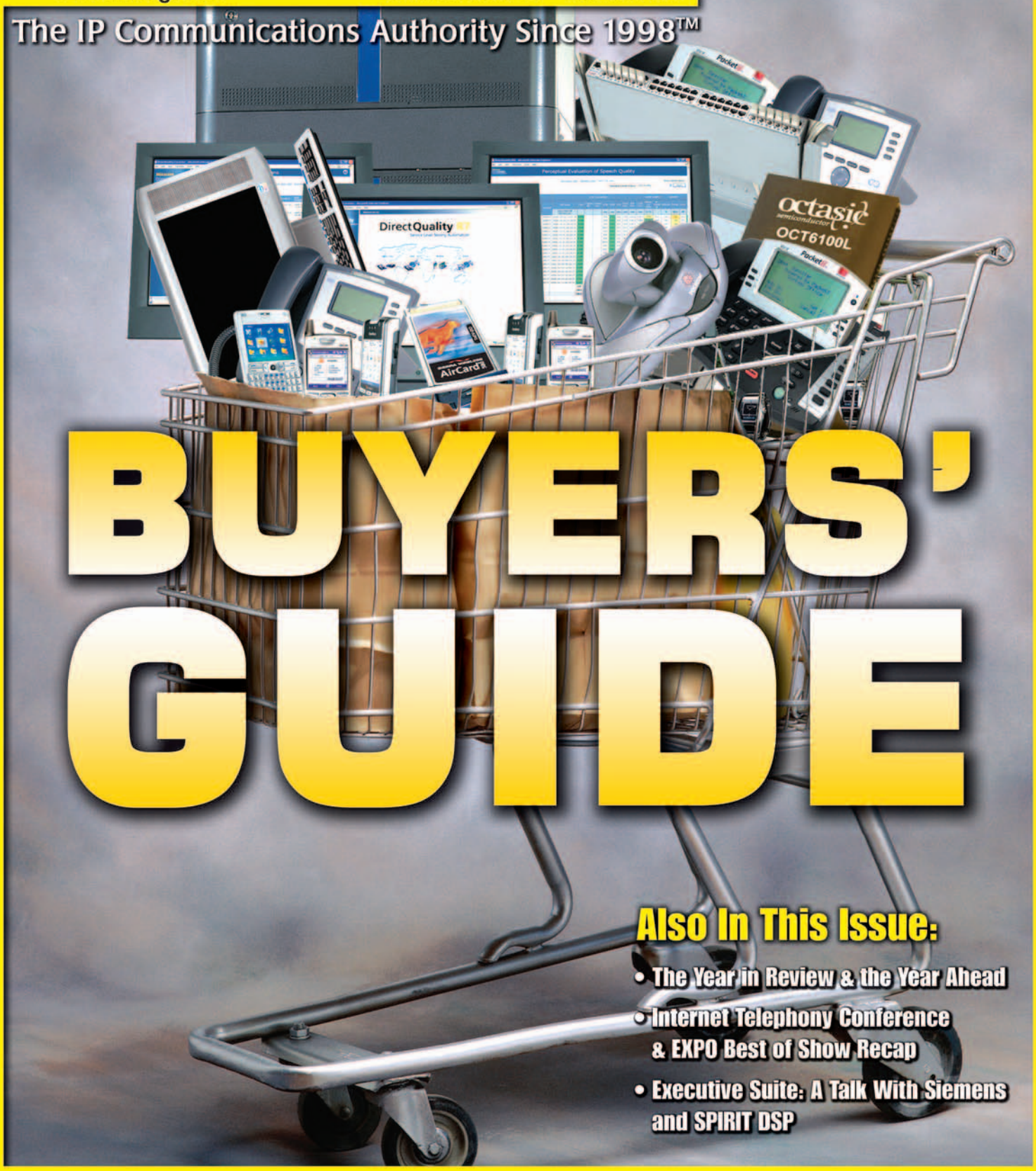
The IP Communications Authority Since 1998™



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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 Zippy Files

By Richard "Zippy" Grigonis

End-of-Year Ruminations

It's that time of year when we tie up some loose ends, collect and straighten out some other odds and ends, and lend an ear to everyone who has something important to say.

You'll find in this December issue of *Internet Telephony* our always-comprehensive annual Buyers' Guide, a keepsake that for many months will reside on the desks of telecom managers around the globe.

Even so, a Buyers' Guide, even as impressive as ours, is a static document that can reveal only what goods and services are available — not 'what it all means'. That's why you'll also discover in this issue a large article about what happened in IP Communications in 2006 and where it's going in 2007. Yours Truly talked with experts at 17 companies operating in various areas of our industry to amass the varied opinions found in these pages. Interestingly, there does seem to be some consensus among our industry figures: For example, the fact that new phone systems deployments inevitably have some kind of IP Communication capability, that IMS will slowly take its final form and be deployed over the next year, and that voice is just one aspect of a growing mélange of collaboration, conferencing, and instant messaging that will roam with users. A year or so ago I coined the term "the Personal Cloud" to describe this evolution in communications — in 2007 we'll see if this "cloud" turns out to be seamless, or just a patchwork of "almost interoperable" technologies that needs more work.

One thing that everybody definitely agrees upon is that IP Communications is not just growing, but is becoming really interesting, even intriguing.

These days, it's difficult to believe that, in the long-ago circuit-switched days, telecom was actually a *boring* industry, and those of us who wrote about it were even more boring. Things were so mind-numbing that one of my former editors, when playing golf with strangers, would avoid questions such as, "So, what kind of industry do *you* work in?" He would pretend to be something other than a telecom writer/editor, though he never said exactly what that was. (Ventriloquist? Middle manager at a bowling ball factory? Stand-up comic? Warm-up act for the Doodletown Pipers? We'll never know.) Fortunately, IP Communications is a lot more interesting than attempting to make a call with a Western Electric 302 black rotary desk phone, as in the Days of Yore.

But even VoIP (define - news - alert) is no longer the tail that wags the IP Communications dog. Communications is exciting again. Like the South Pole in Frank Herbert's *Dune* science fiction novels, it's a land of mystery and possibility. It's a place where some upcoming IMS-hatched "killer app" will make communications — and business itself — not just more productive, but more effortless and entertaining as well. Some people may find the details of such a paradigm too gimmicky, while others will take the opposite view, calling IP Communications a panacea for every business problem. The truth, as always, lies somewhere in between. IT

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

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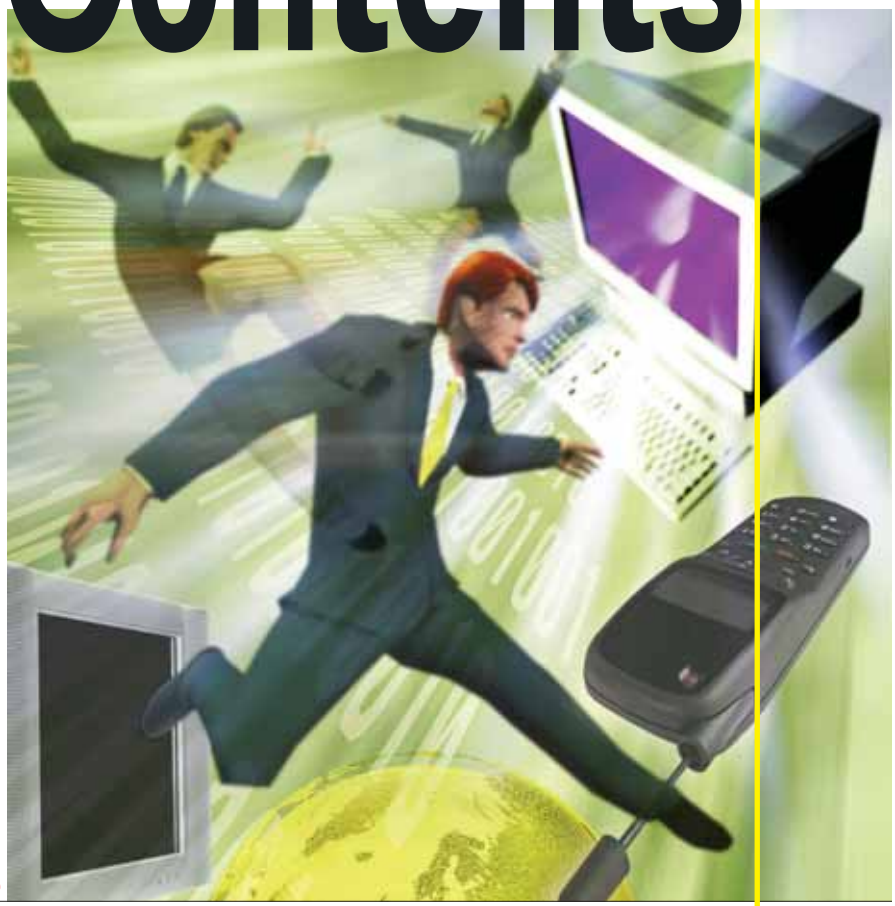

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QUOTE OF THE MONTH:

"I like to play with acronyms. IMS means a lot of things to many different people: To service providers from a business perspective, IMS stands for 'Incoming Money Soon'. From a vendor perspective, it means, 'Install More Sh*#'. If you're on the operations side, trying to make it work, it means, 'Inflict More Suffering'. And in the background across all of this, it means that the 'IETF [Socialistic] Mindset Sucks'. As you can tell, I'm not politically correct, I'm very irreverent."
— Seamus Hourihan, page 80


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WHAT'S ON TMCNET.COM RIGHT NOW

http://www.tmcnet.com/406.1

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. With so many service providers actively engaged in triple play discussions, be sure to regularly visit the Triple Play Channel for the latest news and features: http://www.tmcnet.com/channels/triple-play/. Sponsored by NetCentrex.

TMC's Unified Communications Channel

The idea behind unified communications is to eliminate the barriers created by the communications silos by integrating all forms of business communications. The Unified Communications Channel brings you the latest news and contributed editorial surrounding the convergence of email, IM, VoIP, cellular, video, and Web-based communications. To learn more, visit http://www.tmcnet.com/channels/unified-communications. It is sponsored by Iwatsu.

WHAT'S ON TMCNET.COM RIGHT NOW

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 more than 16 million page views per month, translating into more than 1,000,000 visitors, TMCnet.com is where you need to be if you want to know what's happening in the world of VoIP.

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

Driving Revenue into the Network Through Higher-Margin, Value-Added Services

The telecommunications industry is undergoing a fundamental shift as it migrates from circuit- to IP-based switching. This profound change is resulting in more efficient network architecture with lower administration and operating overheads. It is also leading to the democratization of the provision of telecommunication services with far greater functionality and breadth of services. http://www.tmcnet.com/402.1

The One To Watch: Mobile TV

As uptake of 3G increases and more video-enabled devices are sold, widespread adoption of Mobile TV edges closer. Initial indicators are good, with telecommunications researcher Telephia indicating a 45 percent quarter-on-quarter growth in mobile TV viewers to 3.7 million subscribers in the second quarter of 2006. http://www.tmcnet.com/403.1

Overcoming System Incompatibilities Brought On By M&A

The lineage of my cable company reminds me a bit of a cartoon from my childhood in which a small fish is eaten by a larger fish, which has a big smile on his face until he is promptly swallowed whole by an even larger fish, which in turn is quickly devoured by a shark. The entire scene transpires in about two seconds. http://www.tmcnet.com/404.1

Mobile Communications Now Acceptable at Holiday Gatherings

It used to be that holiday gatherings were a time to put all else aside, and be with loved ones around the table, chatting and catching up on happenings in each other's lives. When cell phones and other communication methods emerged, it became ill-mannered to answer them. http://www.tmcnet.com/405.1

A Luxury Item No More

If you have ever moved in with someone, you know how hard it can be to merge two sets of belongings. Suddenly, you find yourselves with two sets of furniture, two sets of silverware, and two sets of TVs and remotes. How will they fit into one abode? Most companies have felt the same way about upgrading their legacy CRM systems. What is the best way to merge your old data with any new data? And how do you collect data and report on the old and the new?

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VoIP Blog — Tehrani.com

Microsoft VoIP

Andy has an entry titled *Microsoft to Enter the VoIP World* today and it seems to sync up with what I am seeing and hearing from the company as well. It remains to be seen how seriously Microsoft pushes into VoIP in 2007 though. What I can tell you is many large enterprises are looking at what Microsoft (quote - news -alert) does very closely. Many shared these thoughts with me at the last ITEXPO.

In particular many enterprises are focusing on Microsoft's vision for the endpoints their employees will be using. Will phones be obsolete soon they wonder? These discussions have been around for years of course — now that Microsoft is more seriously in the game they are being revisited.

One might imagine that Microsoft doesn't need to push phones but in reality Microsoft will be playing more seriously in the enterprise phone business and let's not forget Windows Mobile devices that will work with the company's VoIP initiatives as well.

What most people don't realize is that Microsoft is reentering the VoIP space. They entered it in around 1996 with NetMeeting and then left it for a number of years. Yes Microsoft is never first but was second in the mid-nineties when they decided to copy the softphone from VocalTec.

To stay in the loop, visit Rich's blog daily at http://tehrani.com

VoIP Authority Blog

Deutsche Bank on Tekelec

Deutsche Bank Securities released a company bulletin of Tekelec today, a company that's been in the news this morning over the purported potential sell-off of their Switching Solutions Group, which was formed through the acquisitions over the past several years of Santera, Taqua, and VocalData.

TMC's editorial team is looking into this developing story, but I thought I'd share a bit of what was in the Deutsche Bank report this a.m.

According to the bulletin...

See more of what Greg Galitzine has to say at: http://voip-blog.tmcnet.com/blog/greg-galitzine/

VoIP & Gadgets Blog

Broadcom PC-less Skype WiFi phone

Broadcom (news - alert) oday announced that the Broadcom WiFi phone now supports Skype software. Similar to other PC-less Skype phones, you will be able to scroll through your contacts, see presence info, make free Skype-to-Skype calls, as well as SkypeIn and SkypeOut support if you paid for these optional services. The beauty of this WiFi Skype phone is of course you don't have to be tethered to your PC, nor does this Skype phone have to communicate with a base station connected (via USB) to a PC running Skype.

The handset features include a high-resolution color display, speakerphone and Buffalo's AOSS easy configuration protocol. The Buffalo WiFi phone will be Skype (news - alert) Certified and available for the Japanese market in November 2006. The handset comes with everything built-in to connect to Skype via any personal, business or free public WiFi access point that does not require browser authentication.

For more, check out Tom Keating's blog at: http://blog.tmcnet.com/blog/tom-keating/

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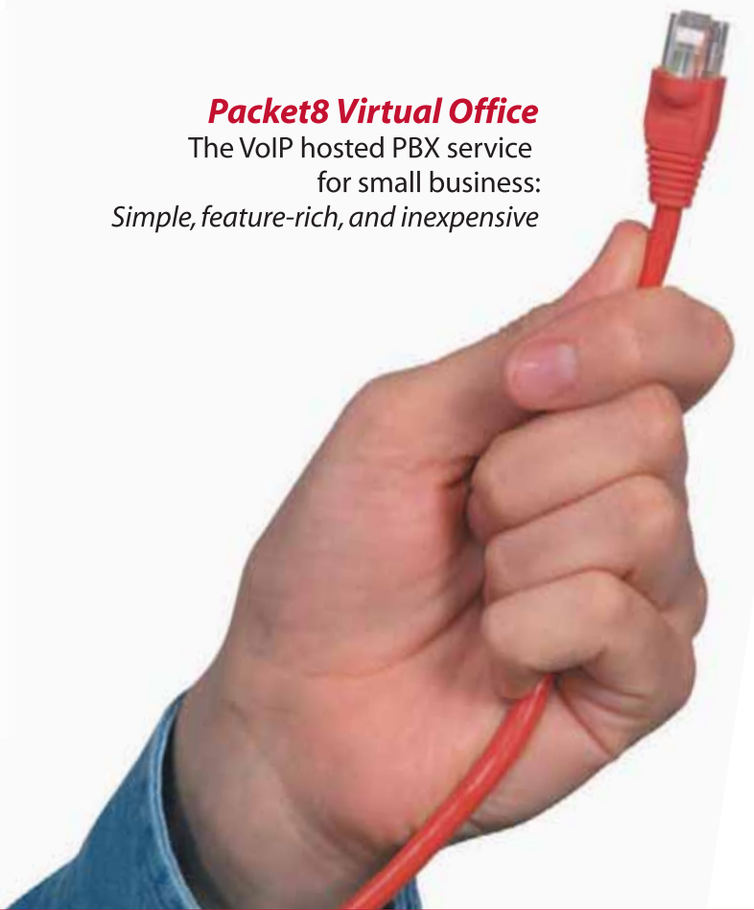

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By Rich Tehrani

Cisco Systems Rockets Ahead, Beats all Estimates.

Certainly the biggest news in recent months is that Cisco Systems, the world's biggest vendor of computer-networking equipment, reported first-quarter 2007 net sales of $8.2 billion (exceeding analyst predictions, which ranged from $7.9 billion to about $8.05 billion) and net income of $1.61 billion (up 28% from last year). In a public statement, Cisco's CEO John Chambers boasted that the company "achieved, once again, record revenue of approximately $8.2 billion, a 25 percent year-over-year increase and a Cisco standalone increase of approximately 16 percent, which was above our standalone guidance of 11 to 13 percent," adding, "This is the fastest standalone year-over-year revenue growth rate we have seen in several years."

After the news appeared, investors jumped into the market, sending Cisco (quote - news - alert) shares surging 7% to a new 52-week high of $27.44. The stock closed that day with a 6% gain, at $26.71 on the Nasdaq. Analysts everywhere either immediately upgraded their rating on the stock to "buy" or else increased their price targets.

The Associated Press quoted Ittai Kidron, an analyst with CIBC: "Few businesses Cisco's size can claim to have achieved what it did in [the quarter] — outperformance in nearly every product line. . . From routers and switches to Digital set-tops and Storage Networks, the company had a breakout quarter, with strong order trends and market share gains. . ."

There are actually several reasons for Cisco's good fortune, the most superficial of which was a strong rally of technology stocks. One should take more notice of, for example, Cisco's astute $6.9 billion acquisition of set-top box manufacturer Scientific-Atlanta in February 2006, which added $584 million to net sales during the quarter. (Scientific Atlanta orders also increased 20% during this time.)

But even more important was Banc of America Securities Analyst Tim Long noting that Cisco had boosted the number of its sales personnel, and the company had done particularly well in Europe and Japan, all while maintaining healthy sales in the USA.

Much of Cisco's spectacular success, then, can be attributed to good old-fashioned increased sales of equipment, thanks to Cisco becoming diversified geographically just as the world is experiencing accelerated broadband and VoIP adoption.

For example, as of June 2006, Analysis Research (http://research.analysys.com) estimated that the number of broadband connections in Europe rose by 4.4 million in the second quarter of 2006 to reach 74.8 million. The proportion of European broadband connections using DSL held steady at 79.9%, while cable lost a bit of share, from 16.6% to 16.4%. Germany remains the largest broadband market in Europe, with 12.5 million connections (16.8% of Europe's broadband connections), followed by the UK and France.

An increase in the number of broadband connections means that more Cisco routers and other infrastructure devices are sold, which is reflected in Cisco's increased revenues. Cisco's U.S. equipment orders grew in the upper-teens and European orders grew in the low double-digits. Carrier orders increased 23%, and even enterprise purchases of Cisco equipment reached into the mid-teens.

Two specific areas of hyper-growth for Cisco were wireless which grew at 40% year-over-year and Unified Communications at 30%.

But broadband growth in Europe, as impressive as it sounds, is just part of the story. Broadband in Asia, particularly China, is growing at a phenomenal rate — adoption rate increases have reached 90% or more annually in China alone. According to the DSL Forum, there are over 140 million consumer broadband connections worldwide, around 37% of which are in EMEA.

The world is stampeding toward broadband, and if Cisco can continue to boost its presence in global markets and achieve the same kind of inroads worldwide as it has in Europe, Japan and the U.S., its revenues will be even more impressive. To reach smaller and more varied carrier markets, Cisco launched during the quarter a new, small form factor version (4-slots, single-shelf) of their Cisco CRS-1 Carrier Routing System, 8 and 16-slot versions of which are normally found in the Internet's largest core installations.

As it is, however, I'm sure they feel good about having 50% share of the router market and about 70% of the overall Ethernet switching market. Just as AT&T/Lucent and Nortel were the "duopoly" of the North American PBX market, the world of big core routing/switching devices also has a duopoly, Cisco and Juniper Networks, which have a combined market share of over 95%. It helps to explain how Cisco can be holding onto a hefty $16 billion in cash and no long-term debt, not to mention its ability to generate a cash flow averaging more than $600 million per month.

Aside from selling infrastructure equipment to support more broadband ports, Cisco is deriving increased revenues

Cisco Also Does Well in the Philippines

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from VoIP. After all, once people become broadband subscribers, they ask their friends what else they can do with it other than surf the web quickly. IP Communications is generally the first "other thing" they hear about.

As VoIP (define - news - alert) usage increases, so does Cisco's revenues from its Linksys home router/gateway division, which started shipping VoIP products in April 2005 and has seen the fastest growth of any Cisco/Linksys product line. These products include the Linksys Phone Adapter for existing routers, the Wireless-G Router with two phone ports (that was named Best VoIP Product in the Wireless Broadband Innovation Awards), and the Wired Broadband Router with two phone ports. Once you plug in your phone to one of these devices, you can then subscribe to Vonage, AT&T CallVantage, Verizon VoiceWing, or EarthLink TrueVoice, depending on which device is supported by the provider.

Linksys and Yahoo have teamed up to sell a cordless phone — the Linksys Dual-Mode Cordless Phone for Yahoo Messenger with Voice (CIT310) — that's specifically designed to make free PC-to-PC calls using Yahoo's Internet voice service. You can also use your Yahoo Phone Out accounts and Yahoo Phone In accounts to make and receive calls. The phone's base station plugs into a conventional phone jack to access ordinary PSTN phone service, and by pressing a button on the phone users can toggle between regular PSTN service and Yahoo Messenger with Voice service. The Linksys CIT310 has a range of 985 feet outdoors and about 165 feet indoors. Standby time is 100 hours and talk time is 10 hours.

However, word-of-mouth inevitably leads many broadband users to the world's single most popular free VoIP application, Skype. As of November 2006 there were 113 million registered Skype users across the globe and over eight million simultaneous Skype calls at any given time. Fortunately, Linksys also offers a phone similar to the CIT310 for Skype users, the Linksys CIT200 Skype.

So, just as Cisco's infrastructure equipment sales are tied to a global increase in broadband and VoIP adoption, so too is the success of Cisco's Linksys division.

Of course, Cisco is involved in other related areas. During the quarter they acquired Arroyo Video Solutions and Meetinghouse Data Communications. They introduced their TelePresence conferencing solution and launched the Cisco Digital Media System and Cisco Wide Area Application Services.

With increased purchases of Cisco gear from enterprises and service providers as they move into bandwidth-hungry IMS and multimedia-centric environments, Cisco Systems could very well continue its phenomenal growth for a surprisingly long time. Much of this growth of course is thanks to

Don't Forget About ITEXPO January in Florida

I love Florida in January and experience has shown that the world's buyers of VoIP and IP communications journey every year to ITEXPO East in Ft. Lauderdale. The brochure for this show is now available and the conferences will be better than ever before. Don't forget about the collocated IMS and Call Center 2.0 events. Check it out at http://www.itexpo.com and join us January 23-26 in 2007.

The Conclusion of the Zultys Saga — For Now

A few months back, TMC's Greg Galitzine broke the story (http://www.tmcnet.com/396.1) on his blog that Zultys had ceased day-to-day operations. From there I wrote about (http://www.tmcnet.com/397.1) the company closing down on my blog and later updated the story when Zultys founder Iain Milnes told me the shut down was temporary. A few days later Iain told me and I reported (http://www.tmcnet. com/398.1) that Zultys was back up and running.

It turns out that if the company was indeed back up and running this was only the case for a short while and a bankruptcy filing took place shortly thereafter with a bankruptcy auction in the works for the future. While this situation took place, TMCnet (http://www.tmcnet.com/399.1) and I reported (http://www.tmcnet.com/400.1) on the happenings. Out of the blue I received a phone call from a Zultys reseller who told me how big his sales pipeline was and moreover how big the pipeline of other resellers was. He had nothing but amazingly positive comments to share.

I shared the comments of this reseller who requested anonymity under a blog entry titled Zultys Reseller Update (http://www.tmcnet.com/401.1). It was at this point the fireworks began. Dozens of commenters were either supportive of Zultys or berated Zultys and even me for having the nerve to write what a reseller told me. Well the reseller was insulted so many times in the blog comments he decided to divulge his identity and from there more people joined in on the dialog. I received many calls and emails about this single entry and it blew me away that a single blog entry became the general source for the Zultys community to get its moment-by-moment information on the happenings of the bankruptcy proceedings.

The comments on the blog started to wind down once the announcement was made that Pivot, a company supported by Telrad Connegy, an Israeli-based PBX manufacturer with a 50-year involvement in the global telecom arena, had purchased the Zultys assets and hired many of their engineers.

About a week or so after the auction, I received an email from Iain Milnes, who told me he wanted to talk about the real facts regarding the ordeal and he went on to say that a tremendous amount of misinformation had been spread. He wasn't able to discuss any of this until we spoke recently.

I had a conversation with Milnes for over an hour and what emerged is quite interesting. He started off by saying he believes the new management is acting very stupidly as they are closing down sales offices throughout the world. Many Zultys resellers around the world have complained to Zultys that they have not been contacted. Iain went on to explain there are eight times as many people in China and India than there are in the U.S. He spent years building up sales and partnerships in these areas and now the new Zultys/Pivot management has destroyed it all in four days.

Milnes went on to say that 60% of the company's business was international and there were offices in Bangalore, China, and throughout the world. Iain went on to say that, at Zultys, they were shooting for the stars and the

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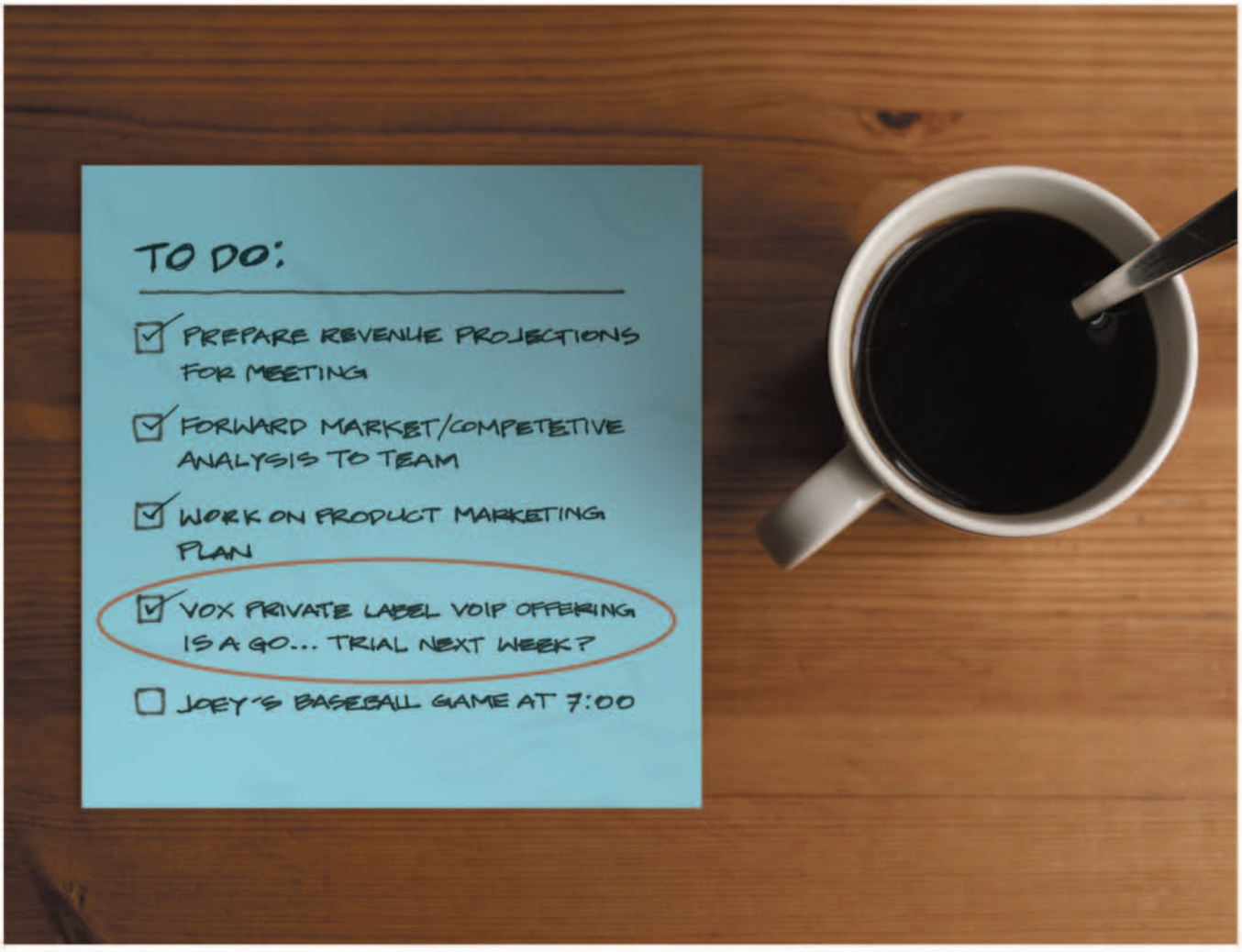
Leading service providers have already called VoX. Have you?



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goal was to make the company an international force in a short amount of time. Many Zultys customers were international as well, so they required their communications partner to be the same.

Iain continued by saying the international customers will not be happy with service and support going forward but they love the product.

Iain and I discussed the fact that an argument can be made that the company is where it is because of a failed strategy that needs to be changed. To this he replied that the new management seems to think you should grow domestically and then expand overseas. He sees this as a flawed strategy, as you aren't able to sell multinationals in this manner and now the channels are already built. Their offices in the UK and Australia are deserted, and China is winding down and relinquishing their lease.

Iain reiterated the point that even if you think international expansion was a flawed investment, it has already occurred. "Homologation in China took 2 years," he said emphatically. It has been made and done and now the office had big orders from major institutions and was profitable. As he said, "Even if you say Milnes did a bad job with international expansion, not retaining it is an even greater mistake." In his opinion, the company doesn't understand why the company has failed. He believes if you are in the PBX space and aren't in China and other parts of the world today, you can never break into these markets.

So why did the company fail? As Iain tells it, Zultys started with a strategy of making the company hundreds of millions of dollars. He says he didn't think they could push Cisco or Avaya out but they thought they could be in the top 3 or 5. He mentioned Zultys was number 3 in Australia this summer in PBX sales.

After investing $67 million of his own money into the company Iain decided to seek a round of funding in the fourth quarter of last year. In the first and second quarters of this year they had more orders than they could deliver. He needed money to put into making products to fulfill expansion. They spoke to 5 investment bankers. Citigroup courted them and got the business as they thought there were good fundamentals, distribution, and the press and analysts were talking highly about the company.

Everyone figured it would take only a few months to get the dollars they needed to keep going and to continue their expansion. Citigroup wanted to be part of the IPO which everyone believed would be a few years away. The investment bank spoke to 97 investors on their behalf and at the end they had one investor. Verbal terms were then agreed upon a few days later, but when they expected a term sheet to arrive they instead received a rejection.

According to Milnes, "There was no Plan B and that was the problem." They never thought they would fail. They seemed to sincerely believe they would get the money and that others would see the value in what they created and did.

In addition, the company had spent money manufacturing overseas but the products never ramped up enough to make it an intelligent investment. In other words, for the amount of product sold, it would have been cheaper to make them in the U.S. Iain seems to have toyed with the idea of laying off the engineering team to save money in order to get them through the tough times, but this didn't seem like a wise idea while the company was seeking investors.

Iain went on to recount the reasons for failure. The list reads as follows and seemed more like a confession than an interview.

- They should have been selling more.
- They should have worked out why they were having their particular problems.
- He understands it now.
- He was the head of the company and it was a team effort.
- They didn't market as well as they could have.
- They didn't engineer fast enough.
- They made lots of mistakes.
- The guy on top — him — did not really know how to take this through with a Plan B.
- They should have planned more carefully.

Iain believes if the company had $10 million and working capital Zultys could have been a great company. He says he will go to his grave wondering why no one wanted to invest in Zultys and he thinks PBXs have been around 100 years and are not sexy.

Milnes went on to talk about all the international success Zultys experienced and how resellers are now sad they have to go to more complicated systems from the competition.

He doesn't think the software engineers have a clue how to run a company. He did point out that he started out [on his own] 20 years ago and wouldn't deny the opportunity to anyone. The challenge as he sees it is in picking up a living, breathing organism. "They are out of their depths," he said, adding, "They have no clue how to run a company or what is required to sell, service, and support a product." He also feels that a few of them have stabbed him in the back. He mentioned that some people currently at Zultys feel the same way and many of these people are looking for other jobs while collecting a paycheck at the company.

Iain went on to say he is sorry to the suppliers, resellers, customers, and employees. He is very sorry for causing so much havoc. He knows he affected lives of employees. He made a mistake and he thinks he knows what he did wrong and what he would do right in the future

I asked Iain what is next for him. He said he will be forming a new company. He doesn't know what it is going to do, but he said, "I think I know a bit about communications and running a company." He said lots of people have come to him and want to work for him. He is still looking for ideas, so if you have any, Iain asks you to let me know and I will forward them to him.

I have known Iain for over a decade. The last company he worked at was called Zarak and it used to make testing products. One of these product lines was called Abacus. The company was purchased a number of years back by Spirent and I mentioned to him that Spirent is still selling the Abacus product. At that point he told me that China sales had mushroomed after Spirent purchased Zarak.

Milnes recently went to dinner with a former salesperson for Spirent who told him that in China they love the Abacus product. He was hoping to achieve this same success with Zultys products. Zultys was into some pretty big accounts. He thinks they could have been very dominant in another 5 years

Iain said, "The loss of international emphasis is the gain of other companies who can capitalize on it." He went on to say he was working so hard and putting in the money. He said he should have stood back and looked at the market. He believes he should have hired a good CFO one year ago and this might have helped, though he mentioned he wasn't looking at the numbers.

Iain summed it up by saying that he saw the success, but did not see the need for cash until it was too late. They wanted to believe they would be successful in raising it. He did not keep his eye on long-term cash flow. That was the fundamental problem in his opinion. Iain also said that Zultys could have sold more, had better engineers, marketers and sales people. He reiterated it was team effort. He asked, "Why was Zarak so successful?" He said they demonstrated excellence in everything they did. He felt they needed more excellence in Zultys. He summarized by saying he blew it and he is terribly sorry — to everyone. IT

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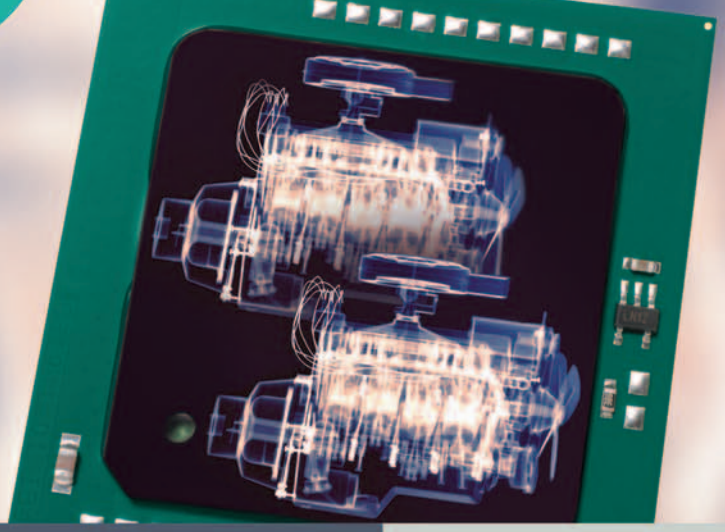

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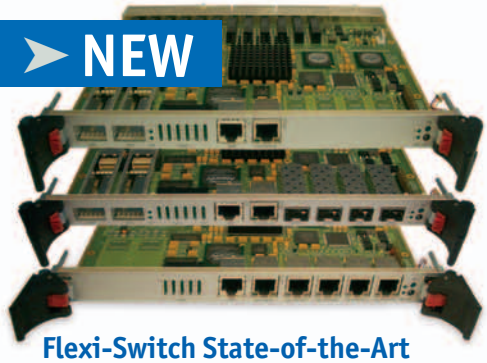

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Nortel Strengthens Support for SMBs with New Products and Enhancements

By Stefania Viscusi

(quote - news - alert) In a bid to help SMBs maximize their efforts towards cost savings, productivity, streamlined operations and superior customer service, Nortel announced new products and enhancements for their SMB portfolio, which provides a complete end-to-end solution that addresses the specific needs of the SMB market, including voice, data, wireless, and Internet solutions.

As part of their latest move to strengthen their SMB offerings, Nortel has announced two new products. The Business Ethernet Switch 200 and the Business Ethernet Switch 50. The introductions of these new products are an enhancement to the companies recently announced SMB portfolio that includes solutions to "bring the power of wireless LAN, Ethernet switching, security, and converged voice and data to smaller business," according to the company.

To further strengthen their foothold in the SMB market, Nortel also announced a series of enhancements to their already existing SMB offerings. One of the key enhancements can be seen in the Business Communications Manager (BCM) 50 Release 2. This platform, providing converged voice and data communication capabilities for SMBs, will now feature reporting, real-time and Web presence features, with the addition of the Intelligent Contact Center and Multimedia Contact Center.

http://www.nortel.com

MobileAccess Networks and Cognio Team on Quality for Enterprise Wireless Networks

By Laura Stotler

Cognio (news - alert) and MobileAccess Networks (news - alert) are teaming up in an effort to ensure quality and reliability of enterprise wireless networks. The MobileAccess Universal Wireless Network will be used in tandem with Cognio's Spectrum Expert to ensure customers receive real-time spectrum analysis capabilities to help detect foreign causes of interference that can degrade network performance.

The Universal Wireless Network from MobileAccess mitigates interference risks that are associated with separate or parallel wireless networks. It features a "Wire-It-Once" architecture to deliver all of a customer's wireless services through a single, multi-service infrastructure in which the interference challenge is contained to one network. The solution conditions every signal to ensure there is no service-impacting interference between wireless services running on the system.

When the Cognio Spectrum Expert is added to a multi-service wireless environment, enterprises may protect against unexpected external interference and enhance their wireless environments. The tools from Cognio offer real-time spectrum analysis, enabling customers to isolate where and when their wireless networks are at risk from foreign interference. When combined with MobileAccess, the Cognio solution is ideal for large enterprise customers requiring multiple wireless services indoors as well as those who require ongoing interference detection capabilities.

"Disparate infrastructures and networks create huge challenges when it comes to the predictability and resiliency of wireless applications and services," said Jeff White, executive vice president at Cognio. "We are excited about our relationship with MobileAccess because together we address both the interference issues caused by multiple wireless networks and the introduction of foreign devices. Cognio provides enterprise IT managers the unprecedented ability to identify devices that degrade network performance, ensuring that WiFi and other networks operate at peak performance and support mission-critical network services."

http://www.mobileaccess.com
http://www.cognio.com

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Ericsson Announces New Version of its MX-ONE Platform

By Anuradha Shukla

Ericsson (news - alert) has launched the third release of its MX-ONE, which optimizes business communications with unique mobility features that increase efficiency and reduces total cost of ownership. Version three of MX-ONE can seamlessly handle voice and data applications and combine mobile and fixed functionalities across private and public networks.

Enterprises can use the solution to control and reduce total cost of ownership by delivering high accessibility and flexibility. They can also smoothly and safely migrate to a future-proof IP network at their individual pace. With extended system capacity for up to 50,000 end-users, standardized management, and Web-based tools, the new version of the MX-ONE IP PBX can maximize business communications.

The version also includes SIP support, in both terminals and trunking for networked systems. MS Office users can now look up and dial people directly from any MS Office document or application thanks to the integration towards Microsoft Live Communication Server.

Businesses can also use the new version to integrate messaging and multimedia services with business class voice communications. Additionally MX-ONE Version 3 enables wireless telephony over WiFi and allows the network to identify the origin of emergency calls made from IP phones. Moreover security has also been enhanced on all areas of management accesses, and media encryption has been introduced.

Ericsson's recent acquisition of Netwise has strengthened converged enterprise services and new business applications like contact and presence management. The company can offer businesses a complete solution to meet their needs together with other Ericsson Enterprise products, such as WLAN base stations and applications.

The Ericsson Corporate Telephony client for mobile smartphones P990 and M600 is a further enhancement of the MX-ONE Mobile Extension. The enhancement enables integration of mobile users with corporate databases and support functions.

http://www.sonyericsson.com

Askey and Texas Instruments in VoIP Deal

By Johanne Torres

Askey Computer (news - alert) announced it has opted for Texas Instruments (TI)'s (quote - news - alert) VoIP systems for its IP phones and residential and enterprise gateways. Specifically, Askey chose to deploy TI's integrated VoIP silicon and software systems, which include the Telogy Software for VoIP and PIQUA software used for better voice quality and IP performance. The first IP phone and gateway products which will incorporate TI's technology from Askey, the VPD1120 phone and the VGE1020 residential gateway and VG603 enterprise gateway, are all currently in production.

"TI's high-performance VoIP technology with embedded quality features offer us the most integrated hardware and software solutions to deliver the best and most flexible VoIP products to our customers," said Wangson Wang, senior director, broadband communication division I, R&D group at Askey in a statement. "We are very impressed with the company's solid roadmap for developing and enhancing its VoIP product portfolio."

TI's TNETV1055 will power Askey's IP phone products by expanding the options for designers to create a wide variety of IP phone offerings. With TI's software, Askey will also be able to integrate different features into its IP phones.

Alternatively, TI's TNETV2021 and TNETV2840 will enable Askey to provide products featuring echo cancellation, adaptive jitter buffering, and tone detection. This combo seems to be a good option for small to medium enterprise applications to be used at places such as apartment buildings and college dorms.

http://www.askey.com.tw
http://www.ti.com

Aruba Plots Course for True Mobility

By Erik Linask

Aruba Networks (news - alert) announced several major new features and product enhancements designed to enhance its Voice over WiFi (VoFi) solutions. The enhancements are part of the company's overall five-stage roadmap for reaching what many agree is the holy grail of communications, true and complete fixed/mobile convergence (FMC).

"You can have fast handoffs or secure handoffs, but the trick is to get them both at once," says Peter Thornycroft, senior product manager at Aruba.

The latest enhancements take into consideration quality and management issues that are likely to present themselves in larger deployments as Aruba continues its drive to make the combination of hardware and network handover better, and more secure.

Improved Quality of Service (QoS) — Full implementation of the WMM specification, plus additional enhancements, ensure consistency between the QoS level and traffic type and permit adjustments to the QoS level as appropriate, delivering voice packets within acceptable delay, jitter and loss parameters. In other words, Aruba has the capability not only to negotiate different levels of priorities, but also to ascertain whether a packet labeled "high priority" actually is such.

Increased Call Capacity — Full support for the WiFi Alliance's TSpec protocol (which is akin to an RSVP system for calls) to allow increased control over the number of active voice calls on an access point (AP) at any given time, assuring bandwidth availability and better call quality, even as voice clients roam between APs. Aruba has been able to get as many as 76 calls on a single AP in a controlled environment.

Improved Battery Life — Because people have gotten used to their small form factor phones, batteries in dual mode handsets cannot be much larger. Improvements include full network-side implementation of WMM-PS, U-APSD and several enhancements, which together can improve talk time by a factor of two and sleep time by as much as five times, by extending sleep times and reducing unnecessary battery drains. Aruba has been able to increase talk time up to four hours and standby time up to 120 hours.

Faster Handoffs — In many cases, dual mode phones have not yet been equipped with the latest state of the art algorithms for faster handoff. Opportunistic Key Caching (OKC) for both WPA2 and WPA clients saves considerable authentication time and reduces call interruption during handover between APs by limiting the number of frames that have to be exchanged at a new AP. The standard reference point tends to be 50ms, but Aruba is measuring handoffs in the 6ms range.

This latest set of enhancements mean that Aruba is able to scale its solution to meet the needs of even the largest enterprises, such that it can move ahead with the third phase of its roadmap, enterprise integration.

http://www.arubanetworks.com

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Verizon Business Intros Web Conferencing Service

By Johanne Torres

Verizon Business (quote - news - alert) announced the introduction of Advanced Net Conference, its new Web-based conferencing suite of services. The telecom's new service suite includes features such as Reserved Net Conference, Instant Net Conference, and Customized Net Conference. These features can be accessed via Microsoft Office Outlook and Microsoft Office Live Communications Server 2005. Advanced Net Conference users will also be able to instantly schedule Web meetings though these software clients.

"This next generation of our successful Net Conference product is meeting a growing demand and desire for virtually 'anytime, anywhere' meetings," said Tom Roche, vice president of marketing for Verizon Business' network voice and data services in a statement. "Whether we're helping to break down geographic boundaries for employees of multinational companies or helping to quickly assemble government workers in response to an unforeseen situation, Verizon Business continues to harness the latest collaborative technology to help enhance teamwork and productivity for our customers."

With Advanced Net Conference, users will also be able to collaborate from anywhere in the world at anytime. Implementing a solution like this will surely slash enterprises' travel expenses. Verizon Business currently handles millions of meetings a month via IP.

http://www.verizonbusiness.com

Hosted VoIP Includes FMC, Naturally

By Erik Linask

Natural Convergence (news - alert) is a hosted VoIP solution provider, which takes a familiar system with its familiar features, adds the advantages of VoIP, and focuses the modernized solution on small businesses with aging solutions and no in-house IT team. These, the company believes, are the companies most desperately in need of an easy to install, easy to use VoIP solution that requires no in-house personnel.

Natural Convergence provides ample features in its platform, including three-way calling, voice mail, and others its customers are used to having. But, among the features of release 3.0 of silhouette, the one that stands out is its Mobile Twinning capability. With the Natural Convergence solution, each user has a Web page that allows them to configure various options, including identifying a mobile number, to which an incoming call can be "twinned." When a call comes in to the user's office phone, the system simultaneously places an outgoing call to the predefined mobile device, creating an increased level of productivity.

In addition, the desktop phone will indicate the user is 'busy,' even if the call is answered on the mobile device, and when the user reaches his desk, he can press that line appearance key and automatically transfer the call to the desk phone without the other party realizing it (save for any call quality improvements).

An added benefit is that users will once again be able to separate their business lives from their personal lives, which, Cork believes is a significant advantage to small businesses. Not do they no longer need to give out mobile numbers, their voice mails will once again be separate — calls dialed to the business number are automatically directed to the business voice mail, even though they ring on both lines.

The twinning feature also accommodates calls being directed to remote offices simply by logging into the system there and enabling the user's main office extension at the remote location.

http://www.naturalconvergence.com

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Customer Success Is Our Mission

Business VoIP Solutions Provider Voxpath Launches Harmonica Connect Services

By Cindy Waxer

For businesses with mobile workforces such as real estate agencies and IT consultancies, routing countless inbound phone calls can easily become a jumbled and disorganized affair. It's a reality that can especially have a devastating impact on small businesses eager to keep customers happy in a competitive environment. Voxpath Networks, however, offers a solution. A provider of hosted communications solutions for small businesses, Voxpath (news - alert) has launched Harmonica Connect services.

Specifically designed for small businesses, Harmonica Connect services gives them a single number to automatically manage and route their inbound phone calls. Small businesses with distributed or mobile employees like service professionals, real estate and mortgage companies, small medical offices, and business services and consultants, are well suited to take advantage of the benefits and features of this hosted business phone service.

Harmonica Connect provides small businesses with the tools they need to streamline their business. A Virtual Receptionist automatically answers and routes calls to individuals or groups, freeing up employees to focus on other critical aspects of the business. A company directory can be easily programmed to include answers to common questions as well as provide callers with direct access to the person or department they need, quickly and professionally.

Employees continue to use their existing mobile phones and land lines, so there's no need for a large upfront capital investment in equipment. In addition, the service is easy to manage, so employees can configure their own forwarding and Find Me preferences to ensure calls get to the right person every time, no matter where they are, minimizing lost calls and reducing the number of call backs.

http://www.voxpath.com

Espial's Evo Server Based on a Strong Pedigree

By Michelle Pasquerello

Espial, (news - alert) a provider of IPTV middleware and applications, is launching its latest IPTV offering called Evo Server, a carrier-grade product collocated with the services provider's head-end or operations center. Evo Server is not an immature product — it has had trial deployments with two lead customers since 1Q06. What sets Evo Server apart from the competition is its open environment which it calls the "Future-Proof Framework" that allows operators and third parties to add applications, integrated third party IPTV ecosystems, and make easy ports to new set-top boxes.

"Open means something very specific to us," said Brian Mahony, VP of Marketing for Espial, in an interview with TMCnet. "Our Future-Proof Framework has tangible financial benefits that allow the operator a much greater level of self-sufficiency at less cost. The ability to create new services or SkinTones without an army of consultants alone is a major benefit, and something not available by the more closed solutions available on the market right now."

The other benefit of the Evo IPTV platform is the superior quality of experience it offers. Just considering EPG navigation time, it can be 2-10 times faster than what Espial calls "first-generation solutions." Aside from its open architecture, the Espial Evo data-driven architecture has "special sauce" resulting in faster performance for end users. Again, Mahony did not elaborate on Espial's trade secrets, but compared the system's performance to "imbedded C code."

Another key attribute of Evo is scalability. In comparison to "monolithic solutions" (we know who Espial is talking about), Espial's scalability has a 10,000/1 server/STB ratio whereas the numbers for some of the other middleware players work out to be in the hundreds.

http://www.espial.com

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Cingular, Samsung, Microsoft Launch BlackJack Smartphone

By Mae Kowalke

Cingular (quote - news - alert), Samsung (news - alert), and Microsoft (quote - news - alert) announced the launch of BlackJack, a multimedia device for making phone calls, listening to music, taking photos, and a whole lot more.

BlackJack pulls together Cingular's BroadbandConnect service and Windows Mobile 5.0 in a sleek handheld.

The three companies BlackJack stressed the device's business-related functionality such as wireless access to e-mail accounts and over-the-air synchronization with enterprise applications like calendar, contact lists and address book, and mobile versions of familiar desktop apps like Windows Media Player, Internet Explorer, and Outlook.

"BlackJack is a true converged product that serves voice and data needs with strengths in multimedia and organization satisfying today's on-the-go consumer," said Kitae Lee, president of Samsung's network business. "Samsung is excited to be working with Cingular and Microsoft to bring the BlackJack to the US market."

BlackJack isn't just for work, though. The device is souped up with a variety of entertainment features. One of those is access to Cingular Music, a service that includes 25 commercial-free XM Satellite Radio channels.

Content available with Cingular Music includes not only songs but music videos, ringtones, and music chatrooms, among other features.

A similar service, Cingular Video, is available for visual entertainment. Content delivered with that service includes sports, news and weather programs; and HBO shows such as "The Sopranos" and "Curb Your Enthusiasm."

"We have hit on the right formula in developing a handheld device that will appeal both to the most discerning business users and the most entertainment savvy consumers," Cingular president and CEO Stan Sigman said in a statement.

Steve Ballmer, CEO at Microsoft, added: "For millions of mobile professionals, this is the device that will be the bridge between work and play."

http://www.samsung.com
http://www.cingular.com
http://www.microsoft.com

Cypress Introduces 2.4 GHz Wireless VoIP Headset

By Cindy Waxer

By uniting interference technology with clean signal delivery, Cypress Semiconductor Corp. (news - alert) has successfully introduced a demonstration kit for a VoIP headset. The new CY4638 VoIP Demonstration Kit pairs the interference immunity of Cypress' low-power WirelessUSB LP (CYRF6936) 2.4-GHz radio system-on-chip with the clean signal delivery of Winbond Electronics Corporation's W681360 CODEC to provide an easily replicated, fast time-to-market design. According to Cypress Semiconductor, the new solution results in fewer interruptions than headsets using competing wireless technologies, and offers a range over 20-meters.

The WirelessUSB LP headset board includes a Cypress Wireless enCoRe II flash microcontroller, a low power Winbond CODEC, and a rechargeable battery with the radio module. Winbond's W681360 single-channel voice CODEC is a 13-bit linear analog-to-digital and digital-to-analog converter. The W681360 offers high performance voice quality at the lowest power consumption in the industry, directly impacting talk-time and battery life.

"A primary concern of VoIP headset manufacturers is dropping packets due to interference, making the extremely robust WirelessUSB LP solution a natural fit to deliver an uninterrupted flow of data," said Matt Branda, senior strategic marketing manager for Wireless Products at Cypress. "Not only does the interference immunity of our WirelessUSB protocol outperform other 2.4-GHz solutions, its robust operation outdoes more expensive Bluetooth and DECT solutions as well. When you add in the excellent signal quality of the Winbond Codec, the CY4638 VoIP Demonstration Kit provides the groundwork for a winning VoIP headset."

The CY4638 VoIP Headset Development Kit includes items such as an innovative dual antenna design for robustness; a small form-factor bridge; and hardware schematics, bill of materials and firmware for Wireless VoIP headset design.

http://www.cypress.com

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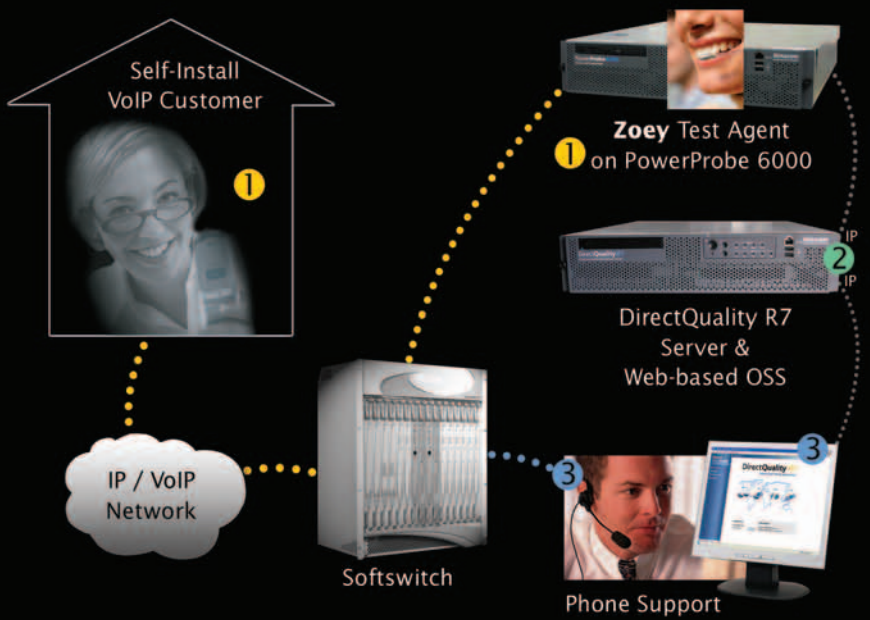

1 Customer with quality problems calls Zoey. Zoey interactively tests VoIP service.

2 Test Results are centrally stored.

3 If required, customer transferred to support. Test results on Web-Based OSS lead to quick problem resolution.

Offering self-install VoIP? FAQs on your web-site can help subscribers get to a dial tone, but who helps them if their caller ID is blocked, their friends are complaining about echo, or when their voicemail and fax don't work?

Minacom's Zoey is an automated IVR VoIP test agent customers can call to test their own service quality, 24/7. Subscribers interact with Zoey to check caller ID, echo, noise, speech quality (MOS), touch tone and fax transmission to discover if their handset or installation is the problem. If there's really an issue, Zoey transfers the call to your support team - with the test results they need to get your customers talking.

Zoey saves support costs and builds customer loyalty – the missing link in your self-install VoIP service strategy.

Zoey is just a phone call away.

Get her number & test your own line:

Minacom.com/Zoey

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Minacom
Service Level Test Automation

Gennum Releases New VoIP Headset

By Cindy Waxer

Delivering a combination of Bluetooth simplicity and high-tech innovation, Gennum Corporation, (news - alert)a provider of technology for personal audio products, has released the nXZEN VoIP headset, its newest Bluetooth product offering. The nXZEN VoIP headset system is a Skype certified combination of Gennum's nXZEN 5000 extreme noise-cancelling Bluetooth headset with the new nXZEN USB audio dongle. Together, this nXZEN pair creates a powerful, plug-and-play VoIP solution that introduces Gennum's own extreme noise cancellation technology to IP telephony users.

The nXZEN VoIP headset system allows call answer/terminate and last number redial up to 10m (33ft) from the PC. In addition, the nXZEN dongle eliminates the need to install Bluetooth drivers directly on a PC. The headset can be paired with multiple devices and offers a full seven hours of talk time and 100 hours of standby to accommodate any user's VoIP and Bluetooth enabled mobile phone needs.

Furthermore, the nXZEN VoIP headset incorporates the newest version of the industry leading extreme noise cancellation technology found in Gennum's nXZEN 5000 headset. The nXZEN VoIP headset combines an integrated Digital Signal Processor (DSP) that can process more than 120 Million Instructions per Second (MIPS) with Gennum's patented FRONTWAVE EXTREME technology which utilizes a two-microphone array to sample two separate points in space. A custom engineered algorithm in the DSP creates a hyper-directional 'near field' pick-up beam to target the speaker's voice and cancel the signal created by all environmental noise. Users are able to make calls in loud settings where phone conversations would previously have been impossible, all while retaining natural voice inflections and eliminating unwanted noise.

http://www.gennum.com

Sprint, Microsoft Strike Deal to Offer Windows Live Search on Mobile Phones

By Mae Kowalke

Microsoft (quote - news - alert) has entered an alliance with mobile phone company Sprint to offer its Windows Live Search on wireless phones. Sprint is offering Windows Live Search on its mobile phones to provide customers with a way "to conveniently search location-based content from the Internet, such as nearby stores and restaurants, as well as Sprint's catalog of ring tones, games, screen savers, and related services," the company said.

Sprint (quote - news - alert) Chief Marketing Officer Mark Schweitzer said that the two companies share a vision to help customers more easily access information while on the go: "By adding Windows Live Search for mobile to Sprint devices, customers now carry with them a depth of relevant local search information, in addition to quick and easy access to their favorite Sprint content."

A key element of the new service is the ability to assign particular keywords or phrases with specific, relevant online content — a method of making searches on a mobile device easier and faster.

"In recent years, the search box has fundamentally changed the way people interact with the Internet, but we have only just begun to scratch the surface for what search and live Internet services can do in the mobile space," commented Steve Berkowitz, senior vice president of Microsoft's Online Services Group.

http://www.sprint.com, http://www.microsoft.com

Skype Selects iSkoot to Deliver Services to Mobile Operators

By Johanne Torres

Partners Skype (news - alert) and iSkoot (news - alert) announced a deal that will enable 3, a mobile operator, to launch a service which includes a pre-loaded version of Skype's software on Nokia and Sony Ericsson handsets, as well as iSkoot's mobile client and network servers. The 3 Group has recently built a new mobile broadband network. The company has marketed the network globally under the 3 brand. The group provides dual mode 3G services.

iSkoot's client software allows mobile customers to use Skype's service on-the-go. iSkoot's servers are integrated into the operators' network so that seamless calling and billing can be offered to their users. The partnership will also enable users to make and receive Skype calls from any mobile phone by using the existing cellular voice network.

"Skype on mobile will quickly become a must-have feature. By combining Skype with iSkoot's mobile solution, users will never be out of touch with their online Skype contacts," said iSkoot's CEO Jacob Guedalia in a statement. "3 is first out the gate, reaffirming the company's cutting-edge, pioneer reputation. By utilizing existing network resources iSkoot enables maximal availability with minimal software investment. Now mobile operators can satisfy user demand for Skype and expand average revenue per user, it's a clear win-win situation. With iSkoot-enabled Skype calls, 3 has a clear differentiator to offer mobile users."

iSkoot's Skype client combo for mobile operators allows the use mobile handsets for Skype calls, without the need for PCs, special hardware, mobile broadband or WiFi; the ability for users to take their Skype Contact Lists with them on their mobile phones; and the chance to let contacts know if users are available by using Skype status icons such as Online, Away, and Not Available.

http://www.skype.com, http://www.iskoot.com

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Which Move Will You Make?

There are two different approaches to Voice over IP. One approach preserves a company's infrastructure investment; the other builds the VOIP network from scratch. Multi-Tech offers a solution that supports either move.

IP Telephony Migration

For the company looking for IP migration, the Multi-Tech MultiVOIP™ Voice/Fax over IP gateway is an ideal fit. The MultiVOIP gateway connects directly to a company's existing PBX, key telephone system, fax machine, or analog phones and extends voice and PBX functionality out to remote locations over a WAN. It can seamlessly tie together dissimilar proprietary PBX systems and provide networking capabilities to key telephone systems that previously weren't available.

Pure Distributed IP Telephony

For the company ready to transform over to pure distributed IP telephony, the MultiVOIP SS survivable SIP gateway is a viable solution for your remote offices. It integrates seamlessly with a central SIP server and provides the branch office with reliable, mission-critical phone connectivity and local office presence by delivering WAN/LAN fail-over survivability, PSTN trunking for local inbound/outbound calls, as well as ATA capabilities for analog endpoints (phones/fax machines).

So, whichever move towards IP telephony you decide to make, Multi-Tech will get you there. Bring convergence to your network today!

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www.multitech.com

Patton Now Shipping VoIP IADs with Integrated G.SHDSL Modem

By Patrick Barnard

VoIP (define - news - alert) equipment maker Patton Electronics (news - alert) announced that it is now shipping the SmartNode 4650 BRI Multiport VoIP IAD and the SmartNode 4960G PRI Multiport VoIP IAD, new additions to the company's impressive portfolio of VoIP customer premises equipment designed for next generation networks. The new VoIP IADs, which include a built-in G.SHDSL modem, are designed to reduce deployment costs and increase profits for carrier-providers that offer business trunking and corporate VoIP services in ISDN markets.

"Now, with the SN4960G and SN4650, Patton is further expanding VoIP profit potential by eliminating the expense of installing customer-site network-access modems," the company said. "Because thousands of units are required for a new service, any CPE cost reduction is multiplied on the provider's bottom line."

These low-cost, high-performance IADs deliver business-class VoIP, voice, and data over broadband access at up to 5.7 Mbps. The ease of installation means businesses can immediately realize the cost savings of VoIP, using advanced hardware and software that seamlessly integrates with existing ISDN systems. The SN4650 provides three to five BRI ports and supports 4 to 8 VoIP calls, while the SN4960G provides 1 to 4 PRI ports and supports 15 to 120 VoIP calls. Additionally, Patton is offering a free VPN license and five-year warranty with each unit ordered before year's end.

"Profitability is not a given with voice-over-IP, "said Burton A. Patton, EVP of Patton Electronics, in the release. "It's a two-way street. Enabling profitable service models for our carrier customers has taken hard work and innovation on our part. Now comes the payoff – Patton's advanced technology is making VoIP profitable ... first for our customers, then for us."

http://www.patton.com

Ixia Consolidates Triple Play Testing

By Erik Linask

Ixia, (news - alert) which develops performance and functionality testing systems for IP networks — including the applications that run over them — has taken its testing applications a step further by developing Aptixia Test Conductor. This software application provides Ixia customers a central interface for managing the automation of multiple test applications.

While Ixia's line of testing software — IxLoad, IxChariot, and IxVoice — provide a comprehensive testing platform for triple play providers, this latest products ties them all together and makes the assessment process simpler and more efficient for service providers as they evaluate various elements of their converged networks.

With Test Conductor, can set up custom regressions — any combination of tests from the various test applications — that are combined and defined with consolidated pass/fail criteria. Each regression can be scheduled to automatically run at a given time, with individual tests running simultaneously or consecutively, as network resources allow. Test engineers design and coordinate testing via an easy to use server-based GUI, allowing multiple technicians to identify and schedule tests. In addition, these same engineers can connect to the server while on the road to monitor or edit scheduled tests or analyze results.

Perhaps the single most significant feature of Aptixia Test Conductor, though, is its ease of use — automation is one thing, but enabling it in a manner that is conducive to easy customization and use differentiates successful products. Especially today, in an environment where new multimedia services are being introduced more rapidly than ever, the ability to quickly, easily, and accurately test them can make the difference between being a leader or a follower.

In addition to enabling the cumulative test process, Test Conductor also enables filtering and reviewing of test results across multiple test runs all without any required scripting, a point on which Ixia prides itself, as it truly enables a much simpler and efficient analysis of service quality.

http://www.ixia.com

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Raytheon Selects Themis RES Servers for the Distributed Adaptation Processor (DAP) Program

Themis Computer (news - alert) announced that Raytheon (news - alert) Company will use Themis Rugged Enterprise Servers (RES) for the Distributed Adaptation Processor (DAP) deployed on the DDG 1000 next-generation destroyer. The Navy's DDG 1000 destroyer, developed under the name DD(X), will lead a class of next-generation, multi-mission surface combatants tailored for land attack and littoral dominance, with capabilities designed to defeat current and projected threats as well as improve battle force defense. Raytheon will accept delivery of development RES systems in 2006, followed by an anticipated initial production delivery in 2007, for the first two DDG 1000 shipsets.

The RES system is based on AMD's fast Opteron processor. Designed to keep operating in environments where other systems fail, Themis' 2RU system uses sophisticated thermal and mechanical techniques to deliver outstanding reliability. To ensure continuous operation in harsh environments, the RES server is designed to withstand shock loads of 25G. When bundled with Red Hatsymbol 210 \f "Symbol" \s 12 Enterprise Linuxsymbol 210 \f "Symbol" \s 12 OS, Themis Rugged Enterprise Servers provide all of the vital components needed to serve the most demanding mission-critical applications.

Ed Geisler, vice president and program manager of DDG 1000 for Raytheon Integrated Defense Systems stated, "the selection of Themis RES Servers is a great example of how DDG 1000 is executing the Navy's Open Architecture (OA) strategy. From a technical perspective, DDG 1000 uses a modular architecture that is based on open standards. The Themis product fits well with that architecture."

http://www.raytheon.com
http://www.themis.com

AMTELCO XDS Adds New Driver Support for H.100 PCI Boards

AMTELCO XDS (news - alert) announced software driver support for Gentoo Linux 2006.0 (kernel 2.6), and Fedora Core 3 (kernel 2.6) operating systems. These new software driver packages are designed for use with AMTELCO XDS H.100 PCI boards.

AMTELCO offers a complete line of XDS H.100 boards, including MC-3 Multi-Chassis Interconnect Boards, Enhanced 256-Port Conference Boards, 8-Port E&M Boards, High Density 24-Port Station Boards, 12/24-Port Loop Start Boards, 16-Port S/T Interface BRI Boards, and 4 or 8-Span T1/E1 Boards. AMTELCO XDS also offers a complete line of H.110 CompactPCI boards.

A full range of easy-to-implement software drivers are available free of charge to XDS customers.

http://www.xds.amtelco.com

Sangoma Ships T1/E1 PCI Cards

By Cindy Waxer

Marking more than 20 years supporting data transport applications in military, aerospace, medical and other mission-critical applications, Sangoma Technologies Corporation, (news - alert) a provider of connectivity hardware and software products for VoIP, TDM voice, WANs and Internet infrastructure, has announced that the A102d, a dual port E1/T1/PRI card with carrier-grade echo cancellation, is now shipping.

The A102d includes the same digital processing and PCI/PCI Express technology as the highly successful four-port A104d card and is intended to provide the benefits of hardware-based echo cancellation and voice enhancement for smaller, two-port T1/E1 installations. The A102d also supports DMF encoding/decoding and tone recognition, voice quality enhancement and adaptive noise reduction.

"The A102d was developed in response to the continuing demand for a small capacity, low-cost E1/T1 card with telco-grade echo cancellation," said Sangoma Technologies president and CEO David Mandelstam. "As an integral part of Sangoma's AFT design family, the A102d inherits the compatibility, enhanced performance and reliability of its siblings."

The A102d supports PBX, IVR, and VoIP applications, such as Asterisk, Yate, FreeSwitch, and many proprietary telephony projects.

http://www.sangoma.com

CLARISYS

Clarisys i750H

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The Clarisys i750H is a full-featured USB IP telephone and speakerphone that provides a crystal-clear digital interface to your PC essential for your VoIP phone communications. Its stylized design is equipped with all the familiar features of a traditional telephone with the added benefit of a specially designed headset port for hands-free communication. Plus the single number portability provides unlimited accessibility!

Benefits and Features:

- Compatible with leading Softphone applications
- Single Number Portability from **multiple** devices
- Sleek design easily fits into a laptop bag
- Integration tools available
- Superior sound and echo cancellation technology
- Headset port for hands-free communication
- Speakerphone for impromptu conference calls
- One Year Warranty

Integration Tools Available – The Clarisys i750H lets you integrate your own applications, including methods, properties and events that simplify the process of working with audio devices and greatly reduce the task of routing audio, changing mixer settings and generating realistic DTMF, dial and ring tone.

CLA-i750H

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Fax: 630-521-9493

BroadLogic Intros TeraPIX Video Processor for Cable Operators

By Niladri Sekhar Nath

BroadLogic Network Technologies, (news - alert) a company that specializes in solutions for broadband networks, introduced its new TeraPIX video processor, designed to help cable operators triple their digital spectrum.

The processor provides bandwidth sufficient to make the performance of multiple system operator (MSO) networks on par with fiber-to-the-home. The result is that operators can offer more and better services — HD channels, telephony, high-speed cable modem — without upgrading their networks.

BroadLogic claims that the BL80000 TeraPIX chip is the world's first massively parallel, multi-channel video processor capable of decoding dozens of digital video streams and generating a full analog and digital service tier, including an 80-plus analog channel lineup.

"The BroadLogic TeraPIX video processor is the cable industry's best path to tripling their digital bandwidth while sustaining the cable-ready competitive advantage they enjoy today," said Danial Faizullabhoy, the company's CEO.

The TeraPIX processing is being marketed as a tool to help the cable industry regain its position by making it easier to provide the type of bandwidth-intensive services (such as HDTV and triple-play packages) that consumers demand.

http://www.broadlogic.com

Pactolus Becomes an Open Source for VoIP Developers

By Erik Linask

Pactolus Communications (news - alert) Software Corporation has introduced its online developer community, http://www.SIPdev.org, which features a SIP-based service creation environment, application server, and software media server — a comprehensive environment including everything developers need to rapidly create innovative, media-rich applications for next generation VoIP and IMS networks. In addition, the site contains complete working applications and supporting application frameworks, all provided in open source to help developers quickly gain proficiency and create quickly deployable applications for their markets.

The SIPdev.org initiative is based on the core underlying Pactolus RapidFLEX Service Delivery Platform (SDP) technology, which is driving a multitude of different IP services at carriers and service providers, but other resources that are available include the RapidFLEX Service Creation Environment (SCE) software, RapidFLEX Application Server software, RapidFLEX Media Server software, and RapidFLEX Element Manager and Prompt Manager software utilities.

In addition, a fully functioning open source reservationless audio conferencing reference application is available for use with both the RapidFLEX Software Media Server and other popular DSP-based media servers.

Essentially, Pactolus is allowing downloads of what it has productized over the last six years and is running in carrier networks today, allowing developers to create applications and services that can quickly and easily be deployed in service provider and enterprise environments.

For educational institutions, the community will provide unrestricted licenses for the RapidFLEX SCE, with the goal of driving innovation back to the Pactolus platform. Developers at schools are looking to develop new applications anyway, so, from Pactolus' perspective, they may as well use what is commercially available to build as big a platform as the want.

http://www.pactolus.com
http://www.sip-dev.org

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CounterPath's VoIP Softphone Certified with BroadSoft

By Erik Linask

CounterPath Solutions (news - alert) provides VoIP and Video over IP SIP softphones, and has seen its market presence grow for the past year or more. Part of the company's growth has been due to its early focus on SIP (Session Initiation Protocol), which has since become widely adopted across the industry. Having already worked the bugs out of eyeBeam, its SIP-based softphone, CounterPath is able to certify interoperability with infrastructure and application vendors.

Early adoption and adherence to SIP standards allowed CounterPath to proven interoperability with a variety of systems vendors like Siemens, Alcatel, Lucent, Nortel, and Cisco, and it has now announced successful testing between eyeBeam 1.5 and the BroadWorks platform from BroadSoft. BroadSoft's (news - alert) voice and multimedia applications and incorporate advanced features that allow service providers to roll out new services, increase revenue, and retain a high level of customer satisfaction.

This latest collaborative effort will provide added flexibility to service providers, knowing their customers will have the benefit of seamless, high-quality audio and video calls, conference calls, and call transfers with the combination of CounterPath and BroadSoft.

The eyeBeam 1.5 softphone — which is can be branded by the service provider — combines voice, video, IM, and presence, thus offering all the key features customers expect from their telephony devices today. Combined with the BroadWorks VoIP application platform, mobile and wireline carriers alike can combine the scalability, open architecture, and proven reliability required by the world's most discriminating businesses and consumers, while offering them the power of integrated SIP-based communications.

The testing on the BroadWorks platform included interoperability trials with the Application Server, Network Server, Media Server, and ComPilot Call Manager, all of were validated.

http://www.counterpath.com
http://www.broadsoft.com

Inter-Tel 7000 SIP Softswitch Available

By Greg Galitzine

Inter-Tel (news - alert) has announced that its much-anticipated Inter-Tel 7000 communications platform is now available for sale. Serving enterprises with up to 2,500 users, the Inter-Tel 7000 provides full PBX-style functionality, and is designed to enable customers to integrate standard SIP devices and applications into their networks to meet their business needs.

The Inter-Tel 7000 delivers a multimedia communications solution offering mid-size businesses and enterprises a series of IP telephony applications. Among these are Inter-Tel's presence management and advanced call routing capabilities; powerful mobility solutions; collaboration, Web and audio-conferencing applications; and user-friendly system administrative and diagnostic tools.

In addition to supporting a broad range of full-featured Inter-Tel IP endpoints, customers also have the flexibility to integrate existing and future standard SIP endpoints, gateways and vertical market applications into their infrastructure to meet their individual business needs.

http://www.inter-tel.com

Data Connection Participates in Global SIP Interoperability Test Event

Data Connection Limited (DCL), (news - alert) the world's leading independent provider of communications protocol software, announced today its participation in SIPit 19, the nineteenth SIP interoperability test (SIPit) event organized by the SIP Forum. SIPit is a week-long event, held twice a year, to improve the quality of the SIP specification and forge global interoperability among SIP implementations. Data Connection was one of over seventy vendors who participated in the event, which was hosted by the University of New Hampshire Interoperability Laboratory.

At the event Data Connection deployed DC-SIP, its carrier grade protocol stack utilized by softswitches, gateways, servers, phones, access devices, and IMS applications throughout the world. DC-SIP, which includes IPv6 functionality, successfully interoperated with a number of SIP solutions in peer-to-peer and multiparty test environments.

"The SIPit (news - alert) events are a great opportunity to ensure industry compatibility and advance SIP technology in general. For example, we were able to confirm multi-vendor interoperability with our IPv6 implementation in a matter of hours," said Jonathan Cumming, Data Connection's Director of VoIP Product Management for Networking Protocols.

http://www.dataconnection.com
http://www.sipit.net

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Exit41 Improves Fast Food Drive-Thru

By Patrick Barnard

One of the newest trends in the Quick Service Restaurant (QSR) industry is call center-based order taking, where your drive-thru orders are actually placed with someone in a call center that is miles — perhaps even thousands of miles — away. After the call center agent takes your order, he or she beams the information over a WAN, VPN, or the Internet directly to the kitchen staff in the restaurant, who then prepare and package your order.

Indeed, restaurant owners who have been bold enough to deploy such systems are likely to tell you that call center agents generally do a better job taking orders compared to on-site employees, because they can focus on just that: taking orders. By the same token, freeing up the restaurant staff from having to take orders allows them to focus on what they do best: preparing and packaging meals, cleaning the restaurant, and handling the transactions. In fact, these new systems deliver efficiencies that are proven to result in happier customers and, subsequently, increased business.

One of the leading companies supplying these systems to the QSR industry is Andover, Massachusetts-based Exit41 Inc. — "the next generation restaurant ordering solutions company." During a recent interview with TMCnet, CEO Joe Gagnon explained that the company's system can nearly double the number of drive-thru orders a restaurant can complete each hour, while improving the accuracy of order taking "up to 90 to 98 percent." He said for most restaurants, Exit41's system can deliver ROI "in less than one year." The system is already being used by the major fast food chains — including McDonald's, Wendy's, Burger King, and Panda Express — and is, so far, deployed in more than 40 locations across the United States.

In addition, the system greatly improves order tracking. A digital camera mounted on the menu board takes a photograph of the driver and the car, so that when that car pulls around to the pick up window, the employee at the window can match the person's order with the photograph on his monitor. This greatly reduces the possibility of the guy in front of you driving off with your order… while you're picking up his. In fact, Exit41 (news- alert) has dubbed this part of its system the "Picture Perfect" solution. Similarly, its proprietary technology, which just recently won patent approval, is known as its "Order Perfect" solution.

http://www.exit41.com

Telrex Announces CallRex Support For Cisco Unified Contact Center 7.0

By David Sims

Telrex, (news- alert) a developer of VoIP call recording and monitoring software for businesses using IP PBXs or hosted PBX services, has announced CallRex support for Cisco Unified Contact Center 7.0 Enterprise Edition. With this integration, Telrex officials say, "call centers can now trigger their CallRex recordings with Cisco Unified Contact Center Enterprise Agent ID and DNIS fields."

CallRex's ability to record agents based on their Agent ID is meant to enhance the value of Cisco Unified Contact Center Enterprise deployments by allowing call recording for agents in free seating contact center environments.

Michael Gyger, senior product manager at Telrex, said CallRex has frequently been deployed alongside Cisco (quote - news- alert) Unified Contact Center, and "now this custom integration will make it easier for our joint Cisco-Telrex resellers to offer call recording products that help them close contact center deals."

By recording calls by agent instead of by phone, CallRex will track all of a given agent's conversations, regardless of which phone they use. Combined with CallRex Agent Evaluation, tracking calls associated with a specific agent, the system allows managers to evaluate and score phone calls made, regardless of the agent's location in the contact center. These calls can then be reviewed with call center agents to ensure the appropriate training is consistently applied.

http://www.telrex.com, http://www.cisco.com

UCN Announces Real-Time Contact and Call Center Benchmarking

By David Sims

UCN, (news- alert) a vendor of all-in-one, off-premises contact center technology services, has announced inContact/PeerCompare, what company officials describe as a "real-time performance benchmarking service" to be provided in conjunction with BenchmarkPortal. PeerCompare lets contact center managers compare their center's performance against that of other call centers in similar industries.

This service will enable participating inContact call centers to have their automated contact distribution performance metrics automatically uploaded to the BenchmarkPortal database of best practice indicators. Submitted data is compared to other call centers in the same industry, then a gap analysis table is presented within the inContact real-time reporting tool. All individual data is kept in strict confidence by BenchmarkPortal, UCN officials promise.

This service is provided in conjunction with Dr. Jon Anton of the Center for Customer-Driven Quality at Purdue University, and the guy you're most likely to see quoted on a benchmarking issue. The Center has been collecting call center performance data since 1995, and their data warehouse now contains data from over 35,000 call centers in 43 industries and 28 countries.

"Why own on-premises technology when you can gain significant cost advantages and automatically, month-to-month, compare your performance improvements against your peers with the UCN hosted solution?" Anton asks.

http://www.ucn.com

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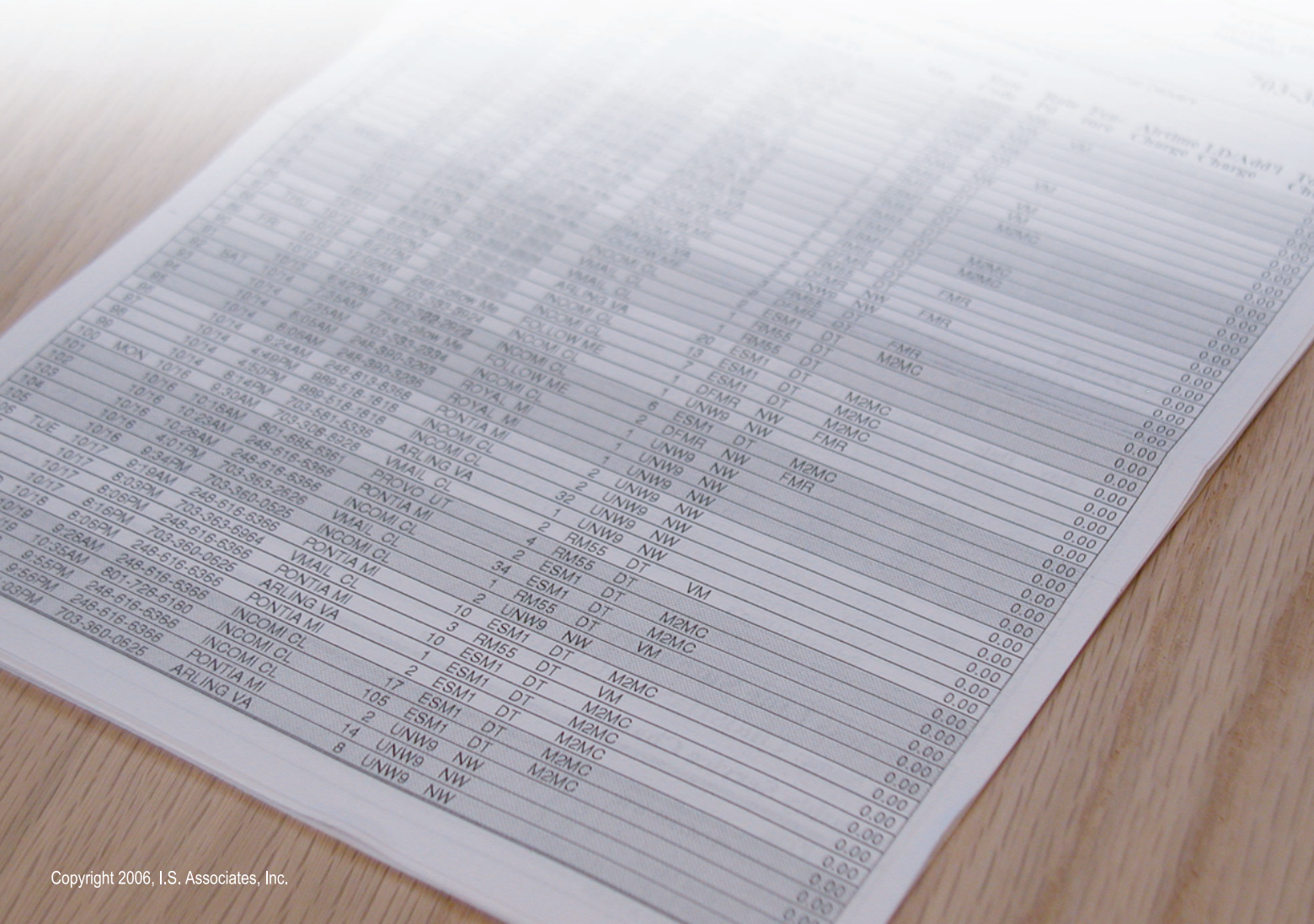

Avaya Acquires Enterprise Mobility Solutions Provider Traverse Networks

By Anuradha Shukla

Avaya (quote - news - alert) has acquired Traverse Networks, (news - alert) a privately held developer of enterprise mobility solutions for unified communications. According to Eileen Rudden, vice president and general manager, Unified Communications Division, Avaya, the acquisition will strengthen their current mobility solutions and extend Intelligent Communications.

"The new capabilities will enable us to support simplified employee collaboration and more productive use of communications, wherever people work and across a broader range of devices," he explained in a press release.

Durk Stelter, CEO, Traverse Networks sees the latest development as a good fit for their solutions and organization. "With a vision similar to our own, Avaya brings additional energy to the goals Traverse set for itself when we started the company. We become part of a larger group of technology innovators, and we look forward to working together to expand our strengths," he concluded.

Based in Fremont, California, Traverse delivers professional call handling applications and sophisticated voice mail management to mobile devices. This enables mobile workers to be more productive and responsive to customers. With Traverse, users can see and hear office voice mail through an email-like inbox on their mobile devices, which offers streamlined access to messages and quick ways to respond.

The inbox displays office voice mail messages with information about the caller, the message duration and the time it was sent. Users can listen to these messages in any order without requiring a number for access, PIN, or touch-tone menus.

The Traverse solution allows users to control office calls and manage voice mail from a mobile device and therefore extends the capabilities of enterprise communications from the desktop.

http://www.avaya.com
http://www.traversenetworks.com

WildPackets Teams with Gigamon to Deliver Expert Analysis of 10-Gigabit Networks

By Patrick Barnard

Network analysis technology provider WildPackets (news - alert) has forged an alliance with Gigamon, (news - alert) a leading provider of data access solutions for out-of-band network monitoring, to bring expert analysis to 10-Gigabit networks.

As a result of this new partnership, IT departments now have at their disposal a range of solutions for troubleshooting and monitoring 10 Gigabit networks, including an Intel PRO/10GbE adapter card, which can be installed in a standard Windows system running WildPackets OmniEngine software — or an integrated solution with the Gigamon's GigaVUE-MP Data Access Switch, which enables IT managers to capture full-duplex 10 Gigabit traffic for analysis across multiple OmniEngines.

Subsequently, WildPackets has also announced a sales and marketing partnership with Gigamon that will enable the two companies to more effectively market their combined solutions.

"Customers who are deploying 10 Gigabit networks tell us they want to take full advantage of all the expert analysis, application monitoring, and VoIP troubleshooting capabilities of our OmniAnalysis Platform," said Mahboud Zabetian, president and CEO of WildPackets. "The options we're announcing give customers a broad range of choices for integrating OmniEngines easily and affordably with their 10 Gigabit networks."

Gigamon Systems' GigaVUE-MP is an out-of-band data access switch. By filtering, aggregating, and multicasting critical data to support multiple network monitoring tools, GigaVUE-MP significantly reduces capital and operating expenditures, and improves network uptime by enabling more flexible network security, monitoring, and troubleshooting, while using fewer and less intrusive tools.

http://www.wildpackets.com
http://www.gigamon.com

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VoIP Supply and CyberData Partner

By Cindy Waxer

In an effort to satisfy the paging needs of today's companies, VoIP Supply, (news - alert) an Internet retailer of VoIP equipment, including IP phones, telephone adaptors, and WiFi VoIP solutions has partnered with CyberData Corp, (news - alert) an OEM design and manufacturing firm. Together, these vendors plan to deliver VoIP paging solutions to the North American marketplace. The partnership will further expand VoIP Supply's product catalog and CyberData Corp's presence in the North American marketplace.

"CyberData's suite of VoIP Paging product's answer the paging needs of businesses making the switch to VoIP," said Benjamin P. Sayers, president and CEO of VoIP Supply, in a press release. "VoIP Paging is an underserved sector of the VoIP equipment market and with the recent growth in the popularity of IP PBX systems in North America, VoIP Supply and CyberData are in an outstanding position to meet the growing demand for VoIP Paging solutions in the market place."

"With broad adoption of VoIP phone systems in the corporate sector, VAR's and resellers are quickly beginning to move from analog paging systems to networked paging devices that are easily connected to existing IP networks with a single Ethernet cable connection," said Matt Brahmana, director of VoIP product management.

The partnership will focus on the sale of CyberData's VoIP Ceiling Speaker, VoIP Paging Gateway, and their VoIP Loudspeaker Amplifiers through VoIP Supply's Internet retail and reseller channels in North America.

http://www.voipsupply.com
http://www.cyberdata.net

Tektronix Acquires VoIP Test Solutions Provider Minacom

By Mae Kowalke

Tektronix, (quote - news - alert) a company that specializes in testing, measuring, and monitoring solutions for a variety of industries, including communications, announced its plans to acquire Montreal, Canada-based telecommunications and VoIP test solutions manufacturer Minacom.

Tekronix said its purchase of Minacom for $27 million will expand its reach into the market for next generation network management solutions.

Tektronix's offerings include passive telecommunications testing solutions for various types of networks (including mobile, IP, SS7, and WiMAX). Minacom's active test solutions for VoIP, voice, video, Internet, fax, and fax over IP complement Tektronix's existing products.

Michel Nadeau, President and CEO of Minacom, (news - alert) told TMCnet a key reason the two companies fit together so well is that Tektronix specializes in passive testing (which looks at the signaling of calls) and Minacom specializes in active testing (which looks at the media involved).

Customers of both companies have been asking about the other type of test solutions, Nadeau said, and now they will have access to a complete range of test products.

"This acquisition will enable Tektronix to offer both active and passive probing capabilities for modern and legacy networks," Tektronix's Senior Vice President and General Manager, Rich McBee said. "The integration of these products into one solution will accelerate delivery of our product roadmaps in key areas such as IP voice, video, and data services and for access and edge network service management."

http://www.tektronix.com
http://www.minacom.com

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www.imsexpo.com

Hosted Services — A Logical Choice for Business

By Richard "Zippy" Grigonis

SMBs (small and medium-sized businesses) have watched the rise of IP Communications with both fascination and anxiety. On the one hand, they are intrigued by the possibility of saving money on phone calls and gaining access to new communications features, but on the other, they worry about the costs of installation and the expertise needed to maintain such IP-based phone systems. Fact is, for most SMBs, a 'do-it-yourself' approach to IP Communications can lead to too many uncertain (not to mention economically unviable) scenarios.

SMBs can still participate in the IP Communications revolution, however, thanks to a bevy of sophisticated broadband-based service providers that have targeted this market segment and can make the migration to voice and video over IP easier than ever before. Smaller businesses can now inexpensively enjoy the same calling features normally found in the big PBX phone systems of large enterprises, simply by contracting with a provider that hosts the technology off-site.

Indeed, offerings such as 8x8's Packet8 Virtual Office service (http://packet8.net/about/virtual_office.asp) are so affordable and easy-to-use that they make sense for residential as well as business customers.

"The TCO, or Total Cost of Ownership, is really the primary reason that people adopt a hosted model instead of a do-it-yourself model," says 8x8's Senior Director of Sales, David Immethun. "Also, 'doing it yourself' can mean many different things, none of which are easy. You could go out and purchase a server and softswitch software, such as Asterisk, but then you end up having to become an expert on your own phone system. SMBs often don't have people on staff who can be dedicated to such issues, so you could say the second reason not to go it alone is the ownership headaches, such as administration, education and upgrades. You could also try hiring a combination of integrators and installers to come into your business, install a system, then put a service contract in place around that, but then you lose a lot of the economic benefits and flexibility."

Immethun beams, "Services such as Packet8 Virtual Office completely eliminate such headaches by offering a model that includes full PBX features with dial tone services, complete service support and furnishes customers with full administration privileges and controls. By removing the headaches, the day-to-day aspect of owning a phone system becomes Moves, Adds, and Changes. With the Packet8 Virtual Office, an Add, Move, or Change can be as simple as literally picking up a phone and moving it without ever making a single administrative change."

Immethun elaborates: "For example, when 8x8 moved from one building across town to another, 110 people bagged their phones with their computers, threw them in their cars, showed up at work the next day, plugged them in, and the whole phone system was moved. There was no administrative person doing this for us. We did it. The plug-and-play ability of these devices is associated not with their IP addresses, but rather with their MAC [Media Access Control] addresses, which uniquely identifies each extension to the service on any network."

"Companies often forget about the maintenance aspects of a phone system," says Immethun. "A phone system often lasts seven to ten years, and, just like a car, it starts to break down over time, so the maintenance costs start to rise. Any a time you want to add a new feature, you typically have to upgrade the system's software release. With a hosted model, such as Packet8's, all new features added to the service are included and all of the maintenance is part of our service offering to the customer. It's a compelling fact that we provide the customer with features, functionality and local and long distance calling. Compare that with the 'normal' business phone system environment where you buy your phone lines from one company and you buy your phone system from somebody else, and you need an integrator to come in and write up a service contract to install the system and keep it maintained and keep the dial tone up."

Today's communications services, such as Packet8 Virtual Office, have targeted SMBs and have formulated a feature set that most companies will find extremely useful, such as One Number Access, Find Me/Follow Me, Voicemail-to-Email, etc.

"Probably the Number One feature that interests an SMB is multi-site support," says 8x8's Immethun. "Normally multi-site support is very expensive to buy and very complex to administer — especially when you add applications such as voicemail, an auto-attendant, or hunt groups. With our Packet8 Virtual Office, the location of the 'site' is irrelevant. And whether you have ten sites with one person or just one site with ten people, from an administrative standpoint it's exactly the same. We give you local and long distance from anywhere for anyone, without the barriers of a local dial tone plan. We'll do it all for you; you have complete *carte blanche* control to administer these employees yourself, or we can accommodate a combination scenario of 'we do some, you do the rest'."

Packet8 offers a variety of service plans.

"In an extreme case, you can actually have no extensions and let the staff operate off of their cell phones, but to inbound callers it will sound as if you have a big phone system in an office," says Immethun. "Our auto-attendant can have several IVR options, such as 'Dial 1 for Sales', 'Dial 2 for Support', and 'Dial 3 to Dial-by-Name'. In actuality, what's behind that is a virtual PBX with no physical hardware whatsoever, pointing to the individual cell phones. Yes, businesses can start, run, and flourish without brick and mortar to house their employees. After all, what could better support a booming virtual company than a virtual phone system?"

"You can also have a combination environment where your road warriors are always on their cell phones, and your other people are either situated in regional multiple offices or in home offices, with a physical handset," says Immethun. "We give them access to extension dialing, music-on-hold, ring group capabilities, as well as access to the auto-attendant. Of course, we can also serve a full-blown company having extensions, virtual employees running around everywhere using cell phones, and virtual extensions that aren't even connected to people, but are used instead for things such as playing prompts for driving directions or the latest sales promotions."

Any way you look at it, services such as Packet8 Virtual Office will have an immense impact on businesses with staffs ranging from just a few people to more than 250. IT

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

Packet8 Virtual Office: Reduces TCO with Combined Hosted PBX and Unlimited Calling Service

By Huw Rees

Small to medium-sized businesses (SMBs) are faced with a difficult task when it comes to selecting or upgrading their telecommunications system. Typically, the economics of investing in a business phone system that is feature-rich and can scale to their potential growth precludes them from purchasing these powerful tools in the initial stages of their company.

As with any technology investment, business owners must consider the Total Cost of Ownership (TCO) when evaluating a telecommunications solution. To estimate TCO, an SMB should look at three major categories:

• Equipment Costs — the initial cost of the equipment that must be in place to implement the desired solution, including associated installation fees.

• Ongoing Monthly Charges — the recurring, monthly service fees associated with implementation of the solution, i.e. local and long distance phone service, day-to-day service management, equipment leases and other per user charges.

• Maintenance Fees — the cost of maintenance, repair and upgrades necessary to keep the solution up-to-date with the latest fixes and enhancements.

The Packet8 (news - alert) Virtual Office hosted IP PBX service from VoIP technology pioneer 8x8, Inc. offers SMBs tremendous TCO advantages. Virtual Office dramatically decreases a businesses' total cost of telecommunications ownership while increasing the features, benefits, and productivity of the organization with the same PBX functionality large corporations have access to at a fraction of the cost..

With Virtual Office, equipment costs amount to less than $150 per user for a Packet8 hands-free business class telephone, Broadband Phone Adapter and one-time activation fee of $39.99 per physical extension. A monthly service fee of $39.99 per extension covers unlimited local and long distance calling in the United States and Canada as well as all service configuration and counseling, administration, changes, upgrades, tech support, and complete Web-based administration system controls. Features such as Auto-attendant, Music On Hold, Extension Dialing, Business-class Voicemail, Caller-ID with Name, Call Waiting, Call Transfer, 3-Way Calling, Call Forwarding, Do Not Disturb, Distinctive Ringing, Hunt Groups, Ring Groups, and more are included with every Virtual Office calling plan.

In addition to dramatically reducing monthly phone bills, Packet8's Virtual Office can help businesses eliminate the overhead cost associated with brick and mortar buildings since employees may work from any location equipped with a high speed Internet connection. Because all Virtual Office users are connected under the same PBX phone system, businesses with staff operating from geographically dispersed offices no longer have to pay premium local and long distance charges for inter-office calling.

Implementation of the Virtual Office solution also saves time — an extremely valuable commodity to most SMBs. Many traditional phone companies require 45 to 60 days to install a new phone network while it takes just five to seven days to receive Packet8 Virtual Office equipment and only five minutes to make it fully operational. Configuration is handled by 8x8, so no special training is required.

8x8 places a high value on customer service which is one reason why 9 out of 10 companies who sign up for Packet8 Virtual Office keep the new service after the 44-day trial period. IT

Huw Rees is Vice President of Marketing & Sales for 8x8's Packet8 services. You can reach him at hrees@8x8.com.

By Marc Robins

IP Communications Enterprise Market Trends

During the last Internet Telephony Conference & EXPO in San Diego, I had the pleasure to emcee and speak on a number of panels that were part of the IP Communications Business Summit, with a number of well-regarded and incredibly knowledgeable individuals, including analyst Jon Arnold, principal of J. Arnold and Associates (http://www.jarnoldassociates.com); Ron Gruia, Principal Analyst and Program Leader Information and Communications Technology at the market research firm Frost & Sullivan (http://www.frost.com); Richard Grigonis, Executive Editor of the IP Communications Group at TMC; Andy Mercker, Director of Marketing at Sphere Communications (http://www.spherecom.com); Ray Hernandez, Managing Partner at VC firm ROTH Capital Partners LLC (http://www.rothcp.com); and Ken Camp, speaker, writer and consultant who also blogs about IP communications technology at IPadventures.com (http://www.ipadventures.com).

Over the course of the two-day event, we covered a lot of ground, delving into the leading industry trends and market drivers for the corporate enterprise, service provider, SMB, SOHO, consumer, and government market segments. We also had an interesting session on the next wave of IP communications technology, where we were able to peer a bit into our crystal balls and discuss what we saw coming down the pike.

So, for those of you who weren't privy to the goings on at the event, I thought I'd offer up a summary of the some of the key talking points and trends we discussed during the session relating to the corporate and government enterprise marketplace. In future columns, I'll try to focus on the other market segments.

The Corporate Enterprise Marketplace

We all agreed that the corporate enterprise marketplace was on fire, and that full-fledged adoption of IP Communications technology was in full force. Today's enterprise customers have a wealth of options to choose from when making the move to migrate from TDM to IP-based communications, and we tried our best to cover them all.

We covered a lot of ground, delving into the leading industry trends and market drivers for the corporate enterprise, service provider, SMB, SOHO, consumer and government market segments.

IP PBXs and Open Source Solutions: CPE-based solutions still appear to be the dominant choice today, with a wealth of choices from an expanding array of system vendors. Most compelling was the torrid growth of the open source-based business, led by the poster child of open source, Digium and its Asterisk solution. And rather than being relegated to small business deployments, open source is making serious inroads into large, campus-based environments (especially in the education market). The price/performance equation is just too good to ignore, and it was agreed that it's only a short matter of time when the "old-line" IP PBX vendors start to feel some real heat from the upstart open-source competition.

Hosted/Managed Services: Hosted IP PBX, IP Centrex and managed VoIP (define - news - alert) services all seem to be enjoying dramatic growth as well, and represent an expanding percentage of the market, especially among SMBs. Witness the growth and success of M5 Networks, a hosted IP PBX service provider in the metro NY area that just made the Deloitte Fast 50 list of the fastest growing NY-based companies; Cbeyond, the publicly traded managed services provider based in Atlanta that is methodically expanding operations in key market segments across the U.S., and Accessline Communications, based in Bellevue, Washington.

SIP Trunking: The movement to directly connect SIP-enabled IP PBXs to SIP-enabled VoIP service providers is gaining momentum as new specifications for interoperability, such as SIPconnect, gain wider acceptance. The argument for SIP trunking is quite compelling: lower costs coupled with increased functionality and security, and a much richer, SIP-infused communications experience.

WiFi Telephony/Dual Mode Phones: Still lagging way behind home environments when it comes to cordless communications, the workplace still has enormous room for expansion with respect to wireless communications, and WiFi telephony and dual-mode mobile phones hold great promise.

We expect 2007 to be the year when wireless VoIP and dual-mode starts to blossom.

Video Telephony: As easy-to-use and low-to-no-cost video capabilities find their way into more IP PBXs, and service providers add more video applications to their service bundles, video telephony is expected to gain serious momentum in the next few years. Technically speaking, there's little to hold IP video back: the main challenge for the industry is to find ways to painlessly evolve user behavior and to nudge users to embrace video as an acceptable mode of business communications.

IP Contact Center Solutions: While only about 7-10% of corporations have embraced IP contact center applications so far, it is expected that the pace of adoption will pick up considerably in the coming years due to the incomparable value-proposition IP communications-empowered contact centers represents, including the savings derived from distributed resources and workforces, and productivity and efficiency improvements stemming from the control and integration of multi-channel communications.

The Government Sector

With respect to the government enterprise marketplace for IP communications technology, it was agreed that the overall adoption rate lags behind that of the private sector, and it appears that government agencies are at least a couple years behind in their embrace of VoIP. Government tends to tread very slowly and carefully when it comes to the adoption of new technology, and their experience with VoIP and IP communications is no different.

The requirements for government are also much more demanding, and compliance with mandated security measures (which can limit or prohibit the use of certain features and capabilities), interoperability and/or duplication of TDM-based priority services, such as GETS (the Government Emergency Telecom Service that allow officials to access network services during times of severe network congestion and over-subscription), and access to emergency e911 services (mandated by law), serve to make the development and the selling of IP communications technology to certain government entities a much more specialized practice. IT

Marc is Chief Evangelism Officer of RCG (Robins Consulting Group), a leading marketing, communications and business development consulting firm dedicated to the IP Communications industry. He welcomes your comments regarding examples of new Web 2.0/VoIP mash-ups making their way to market. For more information about RCG, email marc@robinsconsult.com, call 718-548-7245 or visit http://www.robinsconsult.com.

By Tony Rybczynski

Unified Communications Meets SOA

While Unified Communications greatly enriches person-centric communications, the transformational value of Unified Communications comes from integration with business processes and applications leveraging SOA, the Services Oriented Architecture. In fact, some (see http://www.ucstrategies.com) define Unified Communications as "communications integrated to optimize business processes." This 'application convergence' is the natural next step in the evolution of convergence, that started at the network level with everything on IP, and then evolved to the communications level with Unified Communications. SOA was initially conceived as the way to allow easier business process and application integration. SOA is being extended into real-time communications with the objective of reducing the impact of human delays in business processes.

Application Convergence Drivers

There are three primary drivers for application convergence, the relative importance of which is dependent on business priorities and varies by vertical market.

Firstly, application convergence is driven by the need to enhance customer service in agent-assisted and self-serve contact centers. For example, a customer relationship management application could maintain the context of the customer's experience, as a customer moves from an interactive self-serve voice response or kiosk environment to a live agent to a dialog with an expert, anywhere across the enterprise. For example, this ability would be of paramount importance in financial service institutions which are targeting to up-sell and cross-sell financial services. It would also be critical in any number of service desk environments, for example those run by SIs in support of SLA-based contracts with enterprise customers.

Secondly, application convergence is driven by opportunities to extend the value of business processes and applications by enabling them with Unified Communications capabilities, within the enterprise and beyond, through federations. For example, a supply chain management application detecting a change to a critical supply metric could initiate a collaborative session and deliver relevant data to stakeholders, speeding issue resolution. This general approach can benefit a broad range of industries, including manufacturing, hospitality, retail and healthcare. When combined with sensor networking (including location and RFID), this will result in new environmentally aware applications, adding context to this environment (e.g., identifying personnel in close proximity to an asset).

Thirdly, application convergence adds real-time collaboration capabilities to document handling and project management environments. A broad range of document types could be included here, including curriculum formulation in education, design documentation in hi-tech or in engineering firms, and copy in a publishing company — virtually any deadline-driven environment in which people need to collaborate. For example, a clinical emergency room admission application could route admission forms and electronic patient records to the next available clinician recognizing their roles, presence and location information, and handle exception handling through distributed consultation — all this to speed up the delivery of timely patient care.

Service Oriented Architecture

In many enterprises, the early adopters of application convergence have been contact center environments, tying customer-facing communications systems with back-office applications. These use well-established Computer Telephony Integration (CTI) interfaces, developer toolkits including application programming interfaces (APIs) and select Web Services standards such as XML (Extensible Markup Language). The future direction in this and other areas is SOA, the Service Oriented Architecture.

SOA was initially conceived as the way to interoperate, streamline and accelerate business processes; and to establish a set of service modules easily combined and reused to increase business agility for competitive advantage. One style of SOA uses an Enterprise Service Bus (a functional rather than physical entity), across which business applications can discover,

SOA was initially conceived as the way to interoperate, streamline and accelerate business processes.

invoke, and orchestrate services in various ways. SOA relies on a number of standards developed by three primary bodies: the Web Services Interoperability Organization (WS-I); the WWW Consortium (W3C), and the Organization for the Advancement of Structured Information Standards (OASIS). Some of the more visible Web Services standards include SOAP (Simple Object Access Protocol), WSDL (Web Services Definition Language), and various forms of XML.

Without getting into a protocol discussion, the reality is that SOA methodologies have entered the mainstream with the majority of larger enterprises adopting SOA for business applications development, leveraging products from IBM, Microsoft, Oracle, and others. The adoption of SOA is as important to business today as was the adoption of PCs in the 1980s.

The adoption of SOA is as important to business today as was the adoption of PCs in the 1980s.

With the accelerating adoption of Unified Communications capabilities based on SIP (the Session Initiation Protocol) across enterprise and service provider environments alike, SOA and SIP are joining forces to be the engines behind application convergence across the entire IT industry. In the SOA model, Unified Communications is viewed by business applications as a set of real-time services (e.g., session control, speech recognition, presence and location status, personalization) that can be discovered, invoked and orchestrated in various ways across the SOA Enterprise Service Bus.

Show Me The Money

The value of application convergence through communications-enabled business processes is the acceleration of 'time to X' — time to decision, to revenue, to service, to support, to product; and increased business agility, service velocity and business differentiation. It's business transformational in that it results in a significantly more effective business environment. IT

Tony Rybczynski is Director of Strategic Enterprise Technologies at Nortel. (quote - news - alert) He has over 20 years experience in the application of packet network technology. For more information, please visit http://www.nortel.com.

By Hunter Newby

Least Cost ENUM Routing

Being a moderator of voice peering sessions at industry conferences has its moments. I often make fascinating discoveries right in the middle of a session and that can sometimes be awkward depending on who is on the panel. This has a lot to do with the fact that we live in changing times and sometimes change happens, or is realized, in a single instance. Questions, conclusions, and corresponding answers occur to different people at different times, and trying to capture information in real-time up on a stage and reformat it for audience consumption can be a challenge. Such was the case in two separate sessions on the same topic at the most recent Comptel and Internet Telephony Expo conferences in October.

The subject was Least Cost Routing and ENUM, how they differ related to technology, terminology, and the associated economic models and benefits. In the process of breaking down each component, it was made clear that both LCR and ENUM were software-based routing intelligence mechanisms. Identifying what their reasons for existence are is what became the interesting twist.

LCR has traditionally been a function of bilateral TDM minutes trading with the associated Call Detail Records (CDR), billing and settlement components that minutes carriers have based their businesses on since Day One. LCR has been around over 20 years as a commercial "service," or software function provided to and used by carriers. Through the introduction of IP in to the voice world, LCR has now found itself right where it was in circuit switching, finding the lowest cost IP route for a minute.

ENUM, (define - news - alert) on the other hand, has had a relatively short commercial life span thus far. Originally, ENUM, which is based on DNS, was introduced to the voice business as a multilateral, free traffic exchange routing facilitator. This is due to its roots in ISP multilateral peering which has been around commercially since 1990 and has always been a free exchange of traffic between "peers." Recently, there have been several new entrants to the ENUM service model business and those models include some fee, be it per registered number monthly, or annually, per query, per successful registry look-up, etc. As this new dimension — the departure from multilateral free back to bilateral billed minutes — was openly discussed, it raised a few eyebrows and caused some confusion amongst the audience.

The basis for the confusion it seemed stemmed from the belief, right, or wrong, that somehow ENUM was analogous to multilateral voice peering and the protocol was linked to its economic meaning as well as its technical definition. Many believe that as we all evolve into the future of IP communications, voice as an application ceases to become (or dramatically decreases as) a standalone revenue generating business. In fact, it is believed that voice becomes "part of" an experience, be it gaming, or full-duplex video, or at the very least emulates the Skype model. So, given that assumption, ENUM as a protocol and the providers that offer it as a service should be moving towards that goal and essentially away from LCR.

What materialized from the various models and viewpoints on the panel was actually somewhat different. First, there was the issue of how to interconnect the various, disparate ENUM registry islands. Potential users in the audience wanted to understand the utility of any one such registry if it did not possess "all" of the numbers itself or at least have access to the other registries for look-ups. The barrier to that problem's solution is not in fact a technical one as the separate registries could in fact sort out interoperability issues in the same fashion as email providers have in the past. The real obstacle is in fact the disparity of the various business models and how to get them to interoperate.

If one ENUM service charges a fee per registered number and another charges per query, how do they reciprocally compensate each other?

If one ENUM service charges a fee per registered number and another charges per query, how do they reciprocally compensate each other? Neither have the others' model, nor

revenue streams to adequately pay the other. It quickly became evident that this was a "show-stopper." But then, one of the panelists, a software engineer, made a comment that logically led many to the solution of the issue. He said, "The best way to build ENUM look-up functionality into your network to deal with this is to build a Least Cost Routing engine for ENUM. The first registry your voice switch should query is the free one because this is the best option. If the ENUM number is not found there then go to then next cheapest option. The challenge will be to determine what that next option is beyond the free one. If you know your average call duration you will be able to factor if a fee per query is less expensive than a fee per number, but this requires significant analysis and programming."

What? An LCR for ENUM? Many in the audience thought, "Isn't that an oxymoron?" As Mark Fedor, CTO of SunRocket sees it, "Eliminating the cost accounting, billing and settlement for minutes is the primary reason for multilateral peering." The complexity of building and maintaining an LCR for ENUM is only matched in difficulty level by the question of who is going to pay for it and then of course coming up with the cash.

As one member of the audience stated after the IT Expo session, "If a free exchange is the first logical choice because of the clear benefits of no fees to account for, then why would any user want to have a service with fees for ENUM?"

The complexity of building and maintaining an LCR for ENUM is only matched in difficulty level by the question of who is going to pay for it.

These sessions dedicated to ENUM and LCR were an eye-opener to the reality that there may not actually be a sustainable, long-term, revenue generating business model for ENUM itself. Well, at least not one without the added complexity and cost of building an entirely new method of least cost ENUM routing. On that note, I would like to thank Rich Tehrani, Greg Galitzine, and the entire staff of TMC for making the IT Expo and that session possible. Without their efforts, these realities would not so soon be realized. IT

Hunter Newby is chief strategy officer for telx. (news - alert) For more information, please visit the company online at http://www.telx.com.

By Dan York

Spam for Internet Telephony: Hype or Reality?

One morning, you walk into your office and find that you suddenly have 100 new voicemail messages waiting for you. Giving a quick listen, you find that none are from your colleagues — instead, you are being offered vacation homes in Florida, better auto insurance rates, new options for home mortgages, and more. Moreover, you find out that: a) all the other employees in your office have received the same type of messages; and b) your voicemail system has run out of room and none of you can receive any more messages. Congratulations! You have just become a victim of Spam for Internet Telephony (SPIT), a new term for the age-old practice of telemarketing.

Is this nightmare scenario a reality? Or is it hype from vendors wanting to sell security solutions?

The answer *today* is that the threat is more theoretical than real — but that will definitely change in the time ahead as we move to more interconnected systems.

Before we examine SPIT, though, let's take a step back and look at the overall issue of unsolicited telephone calls over the standard Public Switched Telephone Network (PSTN). Today, telemarketers are limited in the number of calls they can make by two major factors: cost and the PSTN's inherent latency. To do large-scale telemarketing, there is a very real cost for the required PSTN trunk lines, telephony equipment, etc. There is also the time required for each call to be set up over the PSTN. Both factors can certainly be addressed — the cost continually decreases and automated dialers are available — but they do impose limitations on the number of simultaneous connections that a telemarketer can make.

But what happens when we remove those limitations? What if the cost to initiate the calls were close to zero? And what if hundreds or thousands (or more!) of calls could be initiated at the same time?

This is the great fear of SPIT. Here is how it could work. Instead of connecting to the PSTN, the telemarketer's system would use the Internet to bypass the PSTN and make calls directly to other Voice-over-IP (VoIP) phone systems using a protocol such as the Session Initiation Protocol (SIP). The basic technique is that the attacker would send a SIP "INVITE" message to various SIP addresses at a company. For instance, they might try extension numbers and just start iterating through "1111@pbx.company.com," "1112@pbx.company.com," "1113@pbx.company.com," etc. Whoever answered, either a person or a voicemail system, would then be sent an audio stream with whatever message the telemarketer wants to deliver. In fact, after successfully making a connection, a smart telemarketer would probably immediately initiate another connection to deliver a second message for another potential client. And a third. And a fourth, etc.

The basic technique is that the attacker would send a SIP "INVITE" message to various SIP addresses at a company.

The cost to the telemarketer is essentially only that of their Internet bandwidth, which, these days, continues to decline dramatically. No special hardware is required — any commodity PC or server can run the required software. Additionally, there is basically no latency in call initiation as SIP INVITEs are simply small packets very similar to those your web browser might send to request a web page. Literally thousands — or millions — of such packets could be sent in a minute. Streaming the audio will still take time and consume bandwidth, but this is again purely a matter of the telemarketer obtaining more Internet bandwidth.

The primary barrier to this being a threat now is the fact that *today* almost all enterprise VoIP (define - news - alert) phone systems are not connected to the Internet in such a way that would allow calls across the Internet from random endpoints. Instead, calls between enterprises must travel over the PSTN, turning the PSTN into a *de facto* "SPIT firewall" between companies and organizations. Even most companies using "SIP trunks" out to Internet Telephony Service Providers (ITSPs) today are primarily using them as a cost-saving tool in place of regular trunks to the PSTN. Those companies have replaced their PSTN trunk lines with a "SIP trunk" across their Internet connection out to an ITSP who in turn is connecting them to the PSTN. However, calls outside their company still go across the

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PSTN.

This all starts to change, though, as enterprises first begin "peering" with other enterprises to allow calls to go directly across the Internet from one enterprise to the other and then take the next step to allow calls to come across the Internet from random SIP endpoints. (This can be done on the PSTN today where anyone can basically call any other number.)

The good news in all of this is that there are people out there working on ways to prevent SPIT. The Internet Engineering Task Force (IETF) is exploring technical solutions, while groups like the VoIP Security Alliance (VOIPSA) are assembling policy and best practices recommendations. Several security vendors offer products to monitor network traffic for potential SPIT attacks and some service providers are working to provide this protection on their networks.

In the end, how do you prevent your VoIP users from drowning in SPIT? If your VoIP systems today do not allow calls from unauthenticated SIP devices, odds are that SPIT is not something for you to worry about today. However, as you look at SIP trunking across your Internet connection or at running SIP proxy servers on the edge of your network, you need to definitely be asking your service providers and vendors what they are doing to prevent SPIT from flooding your network.

The good news in all of this is that there are people out there working on ways to prevent SPIT.

No one wants to come in to receive a flood of unsolicited phone calls or have a voicemail inbox with hundreds of bogus messages, nor suffer the business loss of having their voicemail full. As we move to an increasingly interconnected world of VoIP, the challenge for all us will be ensuring that we can allow legitimate callers to reach us, while limiting the unsolicited calls to an acceptable level. IT

Dan York, CISSP, chairs Mitel's Product Security Team and is also the Best Practices Chair for the Voice-over-IP Security Alliance (VOIPSA).

Mitel (news - alert) is a leading global provider of business communications solutions and services. For more information, please visit http://www.mitel.com.

By William B. Wilhelm, Jr., Esq. and Jeffrey R. Strenkowski, Esq.

VoIP E911: A Year in Review

In June 2005, the FCC issued an order requiring "interconnected" VoIP providers, by November 28, 2005, to offer enhanced 911 (E911) service, which includes the ability to send location and telephone number information automatically to 911 call centers. The order also required interconnected VoIP providers to submit reports detailing their compliance with that mandate. Some VoIP (define - news - alert) providers (mostly "fixed" VoIP providers like cable companies, where the service cannot be moved) had little trouble meeting the Commission's VoIP E911 requirements, making E911 service quickly available. However, many other "nomadic" VoIP providers, which allow their customers to access the service from virtually any broadband Internet connection, faced serious difficulty in deploying their E911 solutions, with most unable to reach the Commission's requirements by the November 2005 deadline.

These delays primarily arose from the limitations these providers have in geographically locating their nomadic customers, their restricted access to network 911 infrastructure, and the short time period provided by the Commission. Some of these providers filed waiver petitions seeking an extension of the Commission's deadline. Others, led by Nuvio Corporation, filed a lawsuit seeking judicial review of the Commission's VoIP E911 Order and a reversal of the rules.

It has been one year since the Commission's VoIP E911 deadline has passed. In that span, great progress has been made, although no nomadic VoIP provider (including services offered by the RBOCs) has complete nationwide E911/911 coverage. Nomadic VoIP providers are required by the FCC to limit selling and marketing their services to those regions of the country where VoIP E911/911 can be provided. Often, this limits the availability of many nomadic VoIP services to the more populous areas of the country.

Some providers have continued to update the Commission on the status of their E911 rollout efforts. Others have not. The FCC has not ruled on any of the waiver petitions, nor has it taken any enforcement action against those service providers that have not deployed a ubiquitous E911 solution.

On September 12, 2006, oral arguments were heard at the U.S. Court of Appeals D.C. Circuit on the VoIP providers' case against the FCC. Nuvio and its joint petitioners agreed that "the FCC in this case had a very beneficial goal, everyone agrees, of trying to increase public safety." Nuvio challenged, however, "the means [the FCC] chose to accomplish it, and particularly the punitive nature of those means as applied to nomadic VoIP." Specifically, Nuvio argued that the FCC "had no factual basis for its conclusion that 120 days was a reasonable if aggressive time period for implementing this capability for nomadic VoIP providers." While the FCC could have offered a longer timeframe, or required VoIP E911 service be provided in a multi-staged approach, they did not do so. According to the Petitioners, "The rule, as written, is basically impossible to comply with."

The FCC, on the other hand, argued that if a longer deadline had been set by the FCC, little progress would have been made on such an important public safety matter. The agency argued that VoIP providers had the tools in place to meet the Commission's November 2005 deadline: "There is record evidence that the technology was there, the various components of the technology were available, and it was simply a matter of making the necessary arrangements, coordination, negotiation with various third parties to get this service rolled out." The FCC also noted that a leading nomadic VoIP provider, had made significant progress reaching agreements to access the underlying 911 infrastructure with Qwest and Verizon, even before the Commission issued the VoIP E911 Order. The Petitioners countered that large providers' size and nationwide footprint may give them a distinct advantage over smaller providers in reaching such agreements. The Court also questioned the FCC's assumption that it was reasonable for smaller carriers to reach nationwide VoIP E911 deployment, when even the largest had itself been unable to do so by the Commission's deadline.

Great progress has been made, although no nomadic VoIP provider (including services offered by the RBOCs) has complete nationwide E911/911 coverage.

The Court also questioned whether it was appropriate for the FCC to implement "technology forcing" rules. The FCC responded that such an approach may be appropriate in cases

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involving public safety. "One of the Commission's primary objectives under Section 1 of the Communication's Act is promoting the safety of life and property by a wire and radio communications." According to the FCC, the Commission previously engaged in something of a technology-forcing approach with regard to wireless 9-1-1, an approach the FCC noted that the wireless industry did not challenge.

When questioned by the Court, counsel for the FCC reiterated that there remains the possibility for enforcement action, or grant of the pending waiver applications, depending on individual VoIP provider circumstances: "The Commission staff is studying the compliance reports. It also has pending waiver petitions. It's trying to make a determination as to whether or not to grant waivers in certain circumstances. So there is a possibility of liability, depending on the particular circumstances and whether or not companies were in compliance by the deadline."

While the FCC's enforcement (or grant of the pending waiver petitions) in this proceeding remain uncertain, a decision by the Court is expected by the end of the year. In the meanwhile, the FCC continues to consider broadening the scope of the E911 obligation to apply to VoIP services such as Skype's one-way VoIP products. The FCC is also considering the submissions of Intrado, Andrew Corporation and others that assert that it may be feasible to use various technologies to automatically determine a VoIP customers' location rather than rely on the customer to manually update their location with their service provider. All of these developments, as well as public safety concerns, ensure that E911 will continue to remain an issue for VoIP providers well into 2007. IT

The FCC continues to consider broadening the scope of the E911 obligation to apply to VoIP services such as Skype's one-way VoIP products.

William B. Wilhelm is a partner and Jeffrey R. Strenkowski is an associate at the global law firm of Bingham McCutchen LLP. For more information, please visit them online at http://www.bingham.com. The preceding represents the views of the authors only and does not necessarily represent the views of Bingham McCutchen LLP or its clients. Bingham McCutchen represented the Petitioners in the case described above.

By Joel A. Pogar

VoIP: All Mixed Up

Heterogeneous VoIP may sound like something you need a vaccination for, but it's one of the latest buzzwords circling the IT industry. It's hard to refute that Voice over IP (VoIP) has taken off in the last few years. Many businesses, big and small, have adopted VoIP for the features and cost savings it has to offer. As the VoIP industry has grown, so have the number of VoIP vendors. Just a few years ago, there were only four or five serious VoIP product vendors; now there are over a dozen and the list keeps growing. Even Microsoft plans to enter this market in a big way with the release of its next Windows operating system, scheduled for 2007.

With the corporate economy rebounding, and an increase in the number of mergers and acquisitions, it was only a matter of time before companies ended up managing more than one VoIP system. It's not uncommon for companies in strong growth industries to be grappling with three or more different VoIP systems. This can present challenges with incompatible gateways, redundant voicemail, and inoperable unified messaging systems — basically two or more VoIP (define - news - alert) environments that can't communicate. But what should an IT or Telecom department do? Can different VoIP systems work together? Should everything be replaced? While the answers are varied and complex, depending on which systems and vendors are involved, there are some common issues to consider when integrating disparate VoIP systems.

First and foremost, decide on a standard. If you are currently managing multiple VoIP systems, pick one. No matter what vendors tell you about open standards and interoperability, it's better to manage a single system. One of the biggest advantages of VoIP is cost savings, but cost savings begin to dwindle when managing multiple environments. Disparate VoIP systems may require specialized hardware or software for interoperability and then only offering limited functionality. Such a set-up will ultimately erode the return on investment offered by VoIP, in addition to creating the usual headaches associated with integration and maintenance of two or more systems. Remember, VoIP vendors are aggressively competing for market share today. While most vendors are trusted business partners in your enterprise, some will be willing to sell, or tell you, anything not to lose handsets on the desktop. So, evaluate proposed interoperability solutions carefully, especially if the information is coming from the vendor that may be displaced.

Another consideration is to keep an open mind when evaluating the systems in your environment. The phone system you started with does not have to be the phone system you end up with. If the company you are acquiring has a better VoIP solution, consider adopting their technology as the standard. Too often, IT and telecom managers have an emotional attachment to the system they developed from the ground up. Be objective and think about the business needs of both companies before making a final decision on an equipment standard.

When evaluating different VoIP systems, the protocol being used could be an easy decision maker. There are two common protocols in VoIP systems today: SIP and H.323. A significant percentage of VoIP systems are using SIP, but that does not mean that all of them are. Furthermore, early VoIP systems used proprietary versions of SIP or H.323. So, even if both systems are using SIP or H.323 that still does not mean they will work together. Don't forget to look at the big picture. If your entire telecom environment is heavily weighted toward one protocol or another, changing protocols could add significant delays and expenses to a conversion project.

Not only do the phone systems have to be considered, but any unified messaging, voicemail and security systems also need to be evaluated. Maybe the phone systems are compatible but the voicemail and security architecture are not. Ensure your voicemail and security systems can accommodate the new system, especially if it requires a change in VoIP protocols. Before any implementation or conversion begins, the network of the acquired party should be thoroughly examined. Don't take for granted that everyone uses "best practices" for the initial deployment of VoIP. If the proper network infrastructure is not already in place, such as adequate bandwidth, VLAN segmentation, and QoS, you may be fighting a losing battle. Don't spend hours, days, or weeks trying to figure out why two seemingly compatible VoIP systems can't communicate, only to find out the network was not properly designed in the first place. It happens more than you think.

Finally, if it's decided that one system needs to be replaced, work with your vendor, or telecom provider, for trade-in discounts on the old system. VoIP vendors will offer trade-in discounts, especially for competitive gear. Typically, 10-40% discounts can be achieved when trading in your old system. While some companies try to manage this themselves, it's more efficient to let the vendor do it if they have a trade-in program.

While most VoIP professionals advocate the use of a single system for ease of deployment and maintenance, that's not always possible. Heterogeneous VoIP environments can and do work. Making an educated decision and evaluating all of the criteria are the keys to success. Be sure to evaluate more than just the hardware, and consider what is in the best interest of both companies being united. IT

Joel Pogar is director of network solutions in Forsythe's network solutions and security practice. He has 19 years of experience in telecom, networking and IT security. Pogar is known in the industry as an expert witness on technology matters, and has provided testimony in several high profile trials. He holds CISSP certification and numerous vendor technology certifications, and was formerly CCIE certified.

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By Rich Tehrani & Max Schroeder

A Summary of the Disaster Preparedness and Business Continuity Workshop at IT Conference & EXPO West 2006

The Disaster Planning & Business Continuity Workshop was held in the Pavilion area of the main exhibit floor, Thursday, October 12, and covered a wide variety of subject matter. Many different view points, but the same conclusion — enterprises need to have a business continuity plan in place.

Richard Grigonis, the Executive Editor of TMC's IP Communications Group and the author of the book, *Disaster Survival Guide to Business Communications Networks*, opened the session with a brief history of fault tolerant computing beginning with Step One — recognizing the need for reliable computing power. Richard moved on to cover fault resilient hardware architectures and faultless software designs setting the stage for the entire session.

The next, speaker Gordon Payne, VP of Marketing for Citrix's Advanced Solutions Group, (quote - news - alert)provided a brief overview of recent disasters. One key statistic he garnered from Gartner EXP showed that although 70% of enterprises were prepared for a data center outage, only 13% were prepared to handle a workflow disruption. Gordon went on to review the real-life experience of Citrix customer Lehman Brothers on September 11th. Although nearly 6,000 employees were displaced to more than 20 different locations in New York and New Jersey, the Citrix Presentation Server enabled every application to be deployed through a standard Web browser and Lehman Brothers continued its operations.

Wendell Black, VP Sales, Oracle, (quote - news - alert) provided us with a clear definition of business continuity: "The discipline of managing an enterprise under adverse conditions — this is done by implementing resilience strategies, recovery objectives, and crisis management plans as a key component of an integrated risk management initiative." (Source: The Business Continuity Institute.) Wendell went on to cover the "how to" of deploying contact centers so as to maintain business continuity and also provided numerous links to sites dealing disaster planning.

Greg Gies, Marketing Director of Cantata, (news - alert) reviewed the importance of fax in planning for business continuity. Specifically, Greg examined how IP fax and converged communications provide for added integration and location independence when architecting your company's communication network.

One Touch Global Technologies (news - alert) President Scott Riley provided the reseller perspective for the session and focused on building an awareness of the importance of fax server deployment considerations in a company's PBX implementation strategies. Scott also provided some interesting statistics to demonstrate that "Fax is Alive and Well" including the following:

- More faxing today than 5 years ago.
- ~200 million standalone fax machines
- One Touch corporate fax business: Up ~ 30% *this year*

Todd Landry, Sphere Communications' Senior Vice President, reviewed how an enterprise should evaluate its readiness level and provided examples of 1-hour, 1-day or a 2-day failover type of deployment. Todd emphasized that in a business disruption situation the system should do most of the work regardless of whether the disruption was caused by a complete facility failure, PBX connectivity, PBS Server failure, or other type of disruption. Sphere also introduced the audience to one of its strategic partners, PacStar. Jake Schmidt, Director of Business Development, gave us all a tour of a yellow Humvee they had on the show floor outfitted with a satellite dish. The vehicle housed a PacStar 5500, which is an integrated communications appliance that delivers all the capabilities of a modern office network to any location on the planet — a perfect communications solution for the ultimate disaster.

Jeffrey Stern, VP of Business Development, KoolSpan Inc., (news - alert) focused on assessing resiliency with specific attention to data (replicated), hardware (redundant), Internet/WAN (connections/speed), LAN/Ethernet (replicable), and security, which is their key specialty. He emphasized that by implementing a private network with the proper security products an enterprise will save time, money and personnel bandwidth yet increase security and business resiliency.

C. Don Gant, VP of Channel Marketing and Business Development, Iwatsu Voice Networks, (news - alert) opened with a simple but important fact from AMR Research showing that only 32% of businesses have a disaster preparedness plan in place. He followed with results of a Harris Interactive survey in 2004 which stated that 54% of executives from Fortune 1000 companies admitted to having a technology disruption because they weren't adequately prepared. The most startling fact, however, came from KPMG Risk Advisory Services and *Continuity Insights Magazine*. They conducted a 2005 survey revealing that 43% of businesses damaged in a disaster close for good.

If you would like to drill down further, full copies of all of the presentations can be found at: http://www.tmcnet.com/channels/disaster-preparedness/

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The ECA and TMC will also be hosting several sessions and events to coincide with INTERNET TELEPHONY Conference & EXPO East, at the Broward County Convention Center from January 24-26, 2007 (http://www.tmcnet.com/voip/conference/).

First, there will a special Keynote panel: VoIP Options: Disaster Preparedness — Are You Ready? It will take place Wednesday January 24, 2007, from 3:45 to 4:30 P.M.

Hurricanes. Tornados. Earthquakes. Volcanoes. Our first thoughts turn to the safety of loved ones; however, once the dust settles, our thoughts turn immediately back to getting our businesses back on their feet and back to the business of making money.

Snowstorms. Vandalization. An errant backhoe. A fire in a neighboring business. On the surface, these occurrences don't sound so tragic, but experience has shown us that business disruptions caused by these seemingly benign events can be far, far more problematic when it comes to getting a business back up and running.

This special panel discussion will focus in on what you as an owner or operations manager of an enterprise need to know in order to prepare for the inevitable service disruption due to forces beyond your control, and what you need to do to keep your lights on, keep your phones operational, and keep your business connected. Our experts will share their perspectives and discuss best practices, and most importantly, they will be prepared to answer questions from the audience, helping you learn what you need to know to effectively prepare for the day disaster strikes.

The moderator for this panel will be Greg Galitzine, the Editorial Director of TMC's IP Communications Group which includes TMCnet.com, *Internet Telephony* Magazine, *SIP* Magazine and *IMS* Magazine.

Also, on Thursday, January 25th, from 1:30 to 4:15 p.m. the ECA/TMC team will host a full workshop — Disaster Preparedness and Business Continuity for the Enterprise.

Whether your company already has a plan in place; is in the process of developing a plan; or is simply in the research stage, you need to join us in Fort Lauderdale, Florida to learn more about how to protect your business. IT

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

Max Schroeder is a board member of the Enterprise Communications Association (ECA) and chairman of its Media Relations Committee.

If your organization is interested in participating in the TMC/ECA Disaster Preparedness Communications Forum (DPCF), please contact maxschroeder@tmcnet.com. For additional information on the DPCF and its members, TMC and the ECA, please visit the official DPCF channel on TMCnet.

By Kelly Anderson

Turning Metrics into Gold

Being the mother of a five-year-old daughter, I seem to have a part-time job that consists of keeping up-to-date on the princess stories of today and yesteryear. In doing my homework, I came across an old Grimm fairy tale that I had forgotten about — Rumpelstiltskin. In case you have forgotten, Rumpelstiltskin is about a miller that wanted to marry his daughter off to a king so he makes up a story that she can spin unvaluable straw into invaluable gold to make her seem different and more appealing than other girls. Well, the king sends for her and locks her into a room full of straw to prove her worth to him. She, of course, can not do that, so an opportunistic elf shows up to do the work for her and in exchange she will give him lots of gifts and then finally her firstborn as payment for services rendered. When the time comes for payment, she is unprepared to hand over her new baby girl to the impatient elf. So, the elf gives her three days to find out his name to free her of this obligation, and so on. Needless to say, I could not help but parallel the debate about monitoring the home and carrier network and user activity to this delightful fairytale.

The promise of IPTV and other content-based applications have proven to create quite a stir in the industry. We have seen the emergence of what many would consider to be "gold" to a potential service provider. This "gold" is what back-office professionals used to call CDRs or Call Detail Records in the old telephony days. This CDR data was once only available and needed for applications like billing and fraud control. I think only people who attended ATIS meetings really knew what it was.

Well, the industry is changing, and now there are articles and analysts hyping the importance of this type of data to open up new content and efficiencies as well as monitor user behavior for advertisers, media outlets, and internal marketing plans. While I am pleased to see the exposure on data (I have been a fan for many years of the potential of CDR data), service providers have to be careful about the applications that provide the data, and they need to make sure the data record they receive has a complete picture of a given transaction. Impartial data that does not consider all aspects of the user experience and use patterns may be as useable as no data at all.

All of the data honestly boils down to metrics. These metrics need to be present in the network today to give an accurate picture of the providers' network for capacity planning and QoS monitoring, but what about the picture of what the customer is experiencing?

There is a black hole around the home network that will need to be addressed to make data complete and useable. Just as the king had an expectation about his future wife's capabilities, so too, content providers and advertisers will have the same expectations of IPTV if they make allowances they normally wouldn't just because of the promise of accurate user data. Since most formats and protocols to obtain home network data today are propriety, a provider's ability to work through multiple device vendors to get a clear cut view of data is compromised and almost completely inhibited in today's test markets.

So, what needs to happen to get this effort moving? Just like the value of gold from something inexpensive and seemingly meaningless such as data, service providers from all areas of the industry need to not only work in the organizations that are addressing these issues, but also apply some pressure to vendors wanting to promote and develop propriety protocols that make implementations of a constructive data model difficult and expensive to manage.

There is a black hole around the home network that will need to be addressed to make data complete and useable.

The industry is in need of this change, and there are several groups working on this effort from all areas of the industry. The problem is that the title of "Industry Liaison" has, for all practical purposes, gone away from a provider's infrastructure. Workers have been few in this area and the ones that are working on industry issues are doing double time to give the industry a standard and a single data model and transport

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mechanism that the world of IPTV and other like services can live with.

The promises of data are being made and banked on, but the implementation is still infantile at this stage. The industry must get on board quickly to keep the train of data gold alive and running.

In the next month, IPDR.org will be releasing its specifications and protocol designed to accommodate the data needs of IPTV. This effort was completed with the help of most of the major North American and international standards organizations and is being incorporated into many of the standards for IPTV currently being released as well. It honestly involved a cooperative effort I have not seen among the standards organizations to date.

IPDR.org will be releasing its specifications and protocol designed to accommodate the data needs of IPTV.

The key to its success will be in the implementation by vendors who may or may not have been part of this effort. This has the potential of streamlining network data monitoring and creating a great cross-vendor platform that will make implementation easier and metrics of the entire user experience more complete than ever. The issue is that in the North American competitive communications market it is going to take more than an elf to spin this into gold. It will take the entire kingdom working together to implement a standard that will invite opportunity for all without giving up their firstborn. IT

Kelly Anderson is President and COO of IPDR.org, a collaborative industry consortium focused on developing and driving the adoption of next-gen IP service usage exchange standards worldwide.

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SPIRIT's Andrew Sviridenko

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

In this issue, Rich speaks with Andrew Sviredenko, chief executive officer at SPIRIT DSP.

RT: Describe how your business has changed the world.

AS: Since its inception in 1992, SPIRIT (news - alert) was focused on mathematically intensive software for the global market, and from 1996 we were focused entirely on voice and communications software. By 2002 SPIRIT became the largest DSP software house in Europe (TI data on the number of processors sold with third-party software). With all of our DSP expertise and 140-person team, in 2004 SPIRIT entered the PC voice engine market and licensed SPIRIT voice products to Adobe, Interwise, HP, Paltalk, MediaRing, Oracle, and Microsoft, among many others. In 2005, SPIRIT entered the mobile voice engine market, (VoIP over WiFi and 3G) with deployments now both in Asia and Europe. During the last 10 years, SPIRIT built a global reputation for technically the best voice software products worldwide. Today SPIRIT powers 100 million voice channels and about 40 million audio (music) channels in 80 countries. SPIRIT is now on track (the proper partnerships are already in place) to power a billion voice channels by 2008. SPIRIT is a bootstrap; it had no VC funding, and our prime pricing scheme is a royalty per copy or per channel. So we are not paid much until our client's hardware or software product becomes successful. SPIRIT's success is based on the market successes of our customers' products. SPIRIT now serves 200 telecom, hardware, and software customers with passion and this is why our voice products are technically the best in the world today.

RT: How has your business changed as a result of supplying solutions to Adobe, Paltalk, Oracle, MediaRing, Microsoft, HTC, Compal, and other clients in enterprise conferencing and mobile OEM space?

AS: Each customer brings experience and deeper market understanding. In less than two years SPIRIT got to the leading position in the enterprise multi-way voice conferencing and collaboration market, and now SPIRIT is the global leader in the mobile voice engine market as well. SPIRIT is constantly staffing up professionals, both in R&D and S&M. Lately, HTC and Compal have signed with SPIRIT for mobile voice engines for their 3G video handsets. As I've said, SPIRIT is now on track to power a billion voice channels by 2008; the proper partnerships are already in place for that, such as the one with ARM.

RT: What products we can see from your company soon?

AS: We've already added video to the SPIRIT mobile voice engine. SPIRIT will make major announcements with Tier 1 global customers soon in the mobile voice engine and mobile audio (music) markets. SPIRIT and ARM are global partners now.

RT: What do you think about the future of Mobile VoIP and Wi-Fi telephony?

AS: It is great, and SPIRIT is going to continue its lead in the global mobile voice engine market. The TeamSpirit™ Mobile Voice Engine enables wideband, full duplex, noise- and echo-free voice and a decent battery life on low power ARM processors.

Mobile applications are a true acid test for capabilities of a voice engine supplier. SPIRIT has solutions today to serve the needs of mobile OEMs and softphone developers. TeamSpirit™ Mobile is the industry's first voice engine that enables a full VoIP application and can be run on an ARM9e at 168MHz, as compared to Skype running on a 312MHz Intel XScale processor. The SPIRIT solution ensures rich voice and quality video and is optimized for devices running under Windows Mobile 5.0, Windows Mobile 5.0 SmartPhone Edition, Windows PocketPC 2003, or Windows Smartphone 2003 operating systems.

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Siemens' Thomas Zimmerman

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

Unified Communications has been the focus of many conversations, many articles, and many presentations — it should be, as it is widely purported to be the future of the business communications environment. Unified Communications also means vastly different things to different people and different organizations, and for many of them, unified communications is a new foray. Siemens, however, has been preaching and preparing for it for several years now, and believes the time is now right for Unified Communications to become the dominant solution in the communications landscape.

Rich recently had occasion to speak to Tom Zimmerman, president of Siemens Communications' enterprise systems group, (news - alert) who explained Siemens' approach to unified communications and how it will play out in the coming years.

RT: Can you provide an overview of Siemens' view on unified communications?

TZ: We think we have to combine our key domain, the mobile domain, and the voice domain, so that the customer gains the benefit of these converged worlds. We also think that unified communications should be based on open standards.

One key is that unified communication applications have to be embedded into the IT application landscape and, therefore, this open unified communication. So, "open communication" is our unique position, and it is deeply based on our software oriented architecture with our two main products, the 8000 softswitch and the OpenScape applications around it.

The last thing is that, with the tools we have to help the customer enter the unified communications area, we have to offer a migration path from the traditional world into the unified communications world.

RT: You've been preaching unified communications for quite some time. Can you give me some history of Siemens' view on the market?

TZ: We started talking about unified communications about three years ago, and also talking about integrating our applications, not only into key applications, but into the business processes. We also began closely working with some of the industry leaders in the software world, like Microsoft. As you know, our first product, OpenScape, is now about two years in the market and it's been a leading unified communications application. This is something we want to build on.

We really thank some of our competitors for embracing this decision now that we made three years ago — this shows that this is the right strategy. We now have a three-year product development lead and we are very committed to transforming this into market success — we think the market is starting to pick up in this area and we're still leveraging our alliance with Microsoft.

We also will enter alliances with other big software vendors, like IBM and SAP, and are working very closely with them to reach similar integrated solutions as we have in the unified communication area with Microsoft today.

RT: Has all of the activity surrounding the term "unified communications" been good or bad for your business?

TZ: We are committed to open standards, so we've also had some challenges, because some part of the value chain will be with some of our potential partners. As we move from the telecommunications industry into the IT industry, it is clear we have to focus on our value chain, just as we are focusing on the software business now. Our goal is to be a leading software provider for a focused unified communications portfolio.

The second thing is that we will build upon service. Besides the software business, we will build on our huge sales and service delivery business that we have, which today is about a €1.5 billion business. We will look to transform it more and more to a solution house, offering value-added integration services

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for our products. Our journey is very clear: We want to be a leader in the software business and in the value-added services business.

On the product side, that means that we will give up some part of the value chain. As you know, in the past, we had our own telephone systems with proprietary hardware and software. In the future, we will build on open platforms, open servers, and focus on the software we deliver. This is a change in the entire market, but we prefer to lead this change and this transformation.

RT: What are your thoughts on separating the service provider communications business?

TZ: We think the market will come more and more together. Business customers, service providers, and also carriers will have a bigger presence in our market, as well as some new players like IBM, Microsoft, and even Accenture, and others. We believe our strategy places us as the leading open software solution provider, and having service integration capability will be a good asset in creating additional partnerships with software vendors as well as carriers.

We can also leverage our relationships with our carrier colleagues now, with Nokia Siemens Networks, in order to work together with carriers, helping them enter the enterprise business space. Voice is becoming just another application on the network, but for now, it is still the most complex one — and it's still one for which customers have the highest expectations. They want to pick up their handset and hear a dial tone, and they want to hear it all the time.

So, reliability is the key, and that's why I think, when we combine what we know on the telecom side with our new knowledge on the IT side, we are well positioned to carve out a huge chunk of this service business.

RT: Competitively speaking, whom do you see as the company on which you're most focused?

TZ: This will change over time, but at the moment, of course, it's still the traditional competitors. I expect that, within the next, let's say 12 to 18 months, the new entrants in our market — and I mentioned some with Microsoft, Cisco, and also some of the service providers — will be our largest competitors.

Being a software provider and a system integrator, we expect that our competitors will change with the market, and we do everything to transform our company to remain competitive. This means really working with some of the leading software companies and carriers, on the one hand, and with some of the leading integration companies on the other. This new ecosystem will be a very complex landscape and we will have competitors and partnerships at the same time.

But we believe we are well prepared for playing in this very competitive, but also very fantastic, environment.

RT: From an open systems standpoint, do you think your old competitors, such as Avaya and Cisco, will evolve to be more similar to you? Or do you think that they're going to continue with their traditional approach?

TZ: I think some of them will adopt our approach and build on open standards and SOA and similar things. But others, if they have a huge installed base on a proprietary architecture, they may not want to go to open standards. That's why I think we can offer a clear alternative based on an open standard. We have different deployment models and a more decentralized approach, and putting it all together, we offer quite a unique value proposition.

RT: What are customers saying about it so far?

TZ: Customers really appreciate it. As you know, we introduced the 8000 product last year and, at the beginning, we had some challenges with the new architecture and new product coming out of the carrier space. We have spent much of the year-and-a-half catching up with features and additional requirements and have transformed a lot of R&D from our traditional product to the 8000. So, after two software upgrades this year, our customers realize that the product is not only unique in its architecture and leading in its technology, but also now is much more developed. And the feedback is very good. We are winning a new 8000 customer nearly every week now

Our Microsoft alliance is also very much appreciated, because our customers want to integrate our applications into the Microsoft desktop, so I'm convinced that we are on the right strategic path.

RT: If you're beginning to make more money from systems integration, IBM showed that they were able to generate much higher margins on systems integration and consulting. Is that similar to what you're doing? Wouldn't you make higher margins and more money by going into that business?

TZ: That is the plan. As you know, in the past, proprietary systems were a profitable business, but this is changing now and there are huge price pressures in many markets. Our goal is to balance this with higher margins in the value-added service business — both professional services and managed services and more.

RT: How do you see service oriented architecture as coming into play in this business?

TZ: I think this is prerequisite to integrating our solutions and our applications into a broader IT landscape. Not everyone can do everything on his own in the unified communication area but we think we can build our market share. However, we cannot offer everything in this application landscape and we have to work together with other leading software companies. And this can also only be based on a service-oriented architecture, and we do not want to have relationships with only one or

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two players. Instead, we really want to have the possibility to integrate our applications in most of the other leading systems.

RT: What do you think open source is going to do to the market?

TZ: We do not expect, at least not for our large global customers, a big impact. Most customers still see that open standards and open communications are important, but they should be managed. Our customers are telling us, "open but managed." This is especially true if these applications are to be integrated into the broader IT landscape of these customers, where security and availability become increasingly important.

RT: Are you implying that managed or open source can't be managed?

TZ: I think that there are still a lot of issues around security and other things and, up to now, my feeling, based on feedback from the market, is that customers, especially large customers, are not ready for it. So, for a movement like Asterisk and others, I do not expect a huge impact, not in the next couple of years. We are watching it closely, and we do not want to underestimate it, but, up to now, the reaction of our large global customers tells us we don't have to be very concerned.

RT: How do you see the communications industry changing over the next five years or so?

TZ: I think that unified communication will start to grow dramatically now. We've talked about this for a couple of years, but I think the time has come, and customers are ready for it, partly because of customized solutions available for different verticals. I think this will be a huge growth area.

I think that open standards will become the industry standard, and enterprise communication will become more and more SIP-based — our competitors are also following this assumption. And I think unified communications will fundamentally change the way we communicate. Our customers are really integrating communications into business processes and achieving greater productivity and effectiveness. This will be the next big thing.

For the industry, this means a consolidation in the marketplace for some of the big vendors, like we're seeing in the carrier world. IT

SPIRIT's Andrew Sviridenko
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RT: What benefits do you bring to your clients?

AS: TeamSpirit™ Mobile is the world's most compact voice engine running on mobile devices today — and with the highest voice quality. It allows our clients to aggressively pursue the markets of VoIP-enabled handsets for fast and mass deployments.

RT: What do you think about the future of 3GVT market?

AS: In 2008, 3G phone shipments are forecast to reach 300 million with approximately 250 million consumers using mobile video services. It's a market having great opportunities for everybody. SPIRIT voice products are already deployed in mobile video devices distributed by T-Mobile, Orange, Vodafone, and O2. SPIRIT voice powers the Compal and HTC. IT

The Place to Be, for IP

By Erik Linask

It wasn't all that long ago that we were excited about the advent of mobile telephony — remember those large boxes you used to keep in your car? Since then, much has changed in the world of communications — many things have come and many others have gone, as the communications world has begun its transition to IP. The pace of change has been furious, and the rapid evolution of IP Communications has redefined communication, not only at the office, but at home and on the road as well, with concepts like unified communications. Indeed, businesses large and small are now investigating their options for integrating VoIP into their communications solutions.

The evolution of IP Communications, as far as it has come, is hardly slowing; in fact, it continues to change at an equally impressive pace. Each day, developers, service providers, and software vendors are introducing new products and solutions to further enhance offerings already on the market. With each passing month, new solutions make others introduced just a year ago seem obsolete.

Now, the latest generations of products and services are integrating video into voice applications, combining fixed and mobile solutions through IMS infrastructures, and leveraging IP services to improve productivity, lower costs, and grow revenues. Security, hosting, open source, IPTV, FMC, disaster preparedness, conferencing & collaboration, peering, billing & OSS, and so many other areas are all being fused by IP.

To help identify and understand the trends and opportunities in IP Communications, IP Telephony Conference & Expo (ITEXPO) has, since 1999, been single-minded in its drive to bring together industry movers and shakers to help service providers, developers, enterprises, SMBs, government entities, resellers, and others make informed communications decisions.

Not that anyone really needs an excuse to visit South Florida in January, other than the climate itself, but there is another real reason to find yourself in Ft. Lauderdale this January 24-27. With so many vendors and providers touting their wares, this can be a confusing marketplace — ITEXPO East will help you understand what is important and what is not, now and in the future. In fact, if it's important to IP Communications, you will find it at ITEXPO. The unique blend of speakers and exhibitors at ITEXPO is certain to support TMC's guarantee that attendees will leave ITEXPO more knowledgeable and better able make informed communications decisions, a certainty that is driven by TMC's experienced editorial team and its industry spanning publications — *Internet Telephony*, *SIP Magazine*, *IMS Magazine*, and *Customer Inter@ctions Solutions*, ensuring no stone is left unturned.

At ITEXPO, you will have the opportunity for a first-rate educational experience around IP Communications. Indeed, as the communications landscape evolves, it also becomes more complicated, but ITEXPO offers a learning environment to allow you to keep pace with the industry. Regardless of your background, and your company's business notwithstanding, ITEXPO provides an unparalleled opportunity to understand how the changes in communications can help your firm.

ITEXPO brings to you more commercial-free conference tracks than any other event — with each track offering a variety of micro-topics presented by

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the industry's most knowledgeable speakers for attendees representing all corners of the communications world. Each topic is specifically chosen by TMC for its current relevance, and each speaker is hand-picked based on their ability to communicate effectively while providing an unbiased education.

In addition to sessions covering the most important current topics, this year's event will feature keynote addresses by some of the most influential — and knowledgeable — industry personalities who are looking forward to sharing their thoughts on the opportunity the burgeoning IP Communications space provides, including:

- Chris Gravett, Sales and Marketing Director, Aculab
- James D. Foy, President, CEO and Director, Aspect Software, Inc.
- Mark Zionts, Chief Executive Officer, Cantata Technology
- Laurent Philonenko, VP and GM, Customer Contact Business Unit, Cisco Systems
- Jim Machi, VP, Product Management and Planning, Dialogic Corp.
- Brett Shockley, Founder, CEO and Chairman, Spanlink Communications
- Todd Landry, Senior Vice President, Sphere Communications
- Michael Tribolet, President, Vonage America Inc.

Also, the well-known Service Provider Shootout panel discussion will feature some of the industry's foremost experts as part of a moderated panel that will provide perspectives from leading service providers on next generation solutions, the latest developments, what to expect from the future, as well as real-life stories. Topics will range to include net neutrality, government regulations, competitive pressures, FMC and IMS, wireless alternatives, IPTV, Triple Play, and anything else that might come up.

Special seminars are also on the agenda that will focus on reseller solutions, SIP trunking, VoIP peering, and disaster preparedness. These full-day seminars will help resellers, enterprises, and service providers sort through the myriad of equipment and service alternatives facing them — whether they are looking for themselves, for clients, or for subscribers.

In addition to the unmatched educational tracks and keynotes, Internet Telephony Conference & Expo also rewards attendees with invaluable networking time and an opportunity to see product and service offerings from more than 200 exhibitors on a show floor that grows annually. In the exhibit hall, you will see the latest IP hardware, software solutions, services, and gadgets. The conference schedule leaves generous time to peruse the exhibit floor and meet with the vendors displaying their wares with the single-minded purpose of enabling you to run your business more effectively.

Ultimately, the vendor you choose for your deployment will become as much a partner as a supplier, whether you are deploying a solution or are a service provider preparing your VoIP network. It is your responsibility to ensure these projects run smoothly with minimal disruption, while meeting all your organizational objectives. ITEXPO is the opportune venue for forging these profitable relationships.

At ITEXPO, you will have the chance to meet and talk with other enterprises, service providers, developers, and resellers to share ideas, exchange business cards, and discuss the virtues of one solution over another. You will be able to see all the key players and your peers in one venue, ensuring you are appropriately equipped to make your communications decisions. As a decision maker in the communications space, you have everything to lose by not attending ITEXPO East 2007 — if it is important to the IP Communications space, you will find it in Ft. Lauderdale from January 24-27, and when it's time to head back home, you will have the knowledge and information that will enable you to make the best decisions for your company's future.

As an added bonus — if sunny Florida in mid-winter and the world's biggest IP Communications event don't offer enough incentive — this year's attendees will have an opportunity to win either a new Harley Davidson or a Toyota FJ Cruiser. See you in Florida! IT

For more information or to register for Internet Telephony Conference & Expo East 2007, please visit http://www.itexpo.com. If your company is interested in exhibiting at the show, please contact Dave Rodriguez: drodriguez@tmcnet.com or 203.852.6800 x146.

At the recently concluded Internet Telephony Conference & EXPO, held in San Diego, CA from October 10–13, editors from *Internet Telephony*, *IMS Magazine*, *SIP Magazine*, TMCnet, and TMC Labs met with exhibitors and tried out new products, noting the very best of the show.

That Said, demonstrations of exhibitors' products and services and the sheer volume of new and exciting companies and applications were the real show in San Diego this year.

The Internet Telephony Conference & EXPO Best of Show award recognizes innovative products and solutions that were featured in the Exhibit Hall during the event. This designation serves to highlight the technological achievement and creative product features that set these winners apart from the rest of the crowd. TMC editorial staff met with vendors over the course of the three-day event, and convened for several hours to compare notes and choose the winners.

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

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

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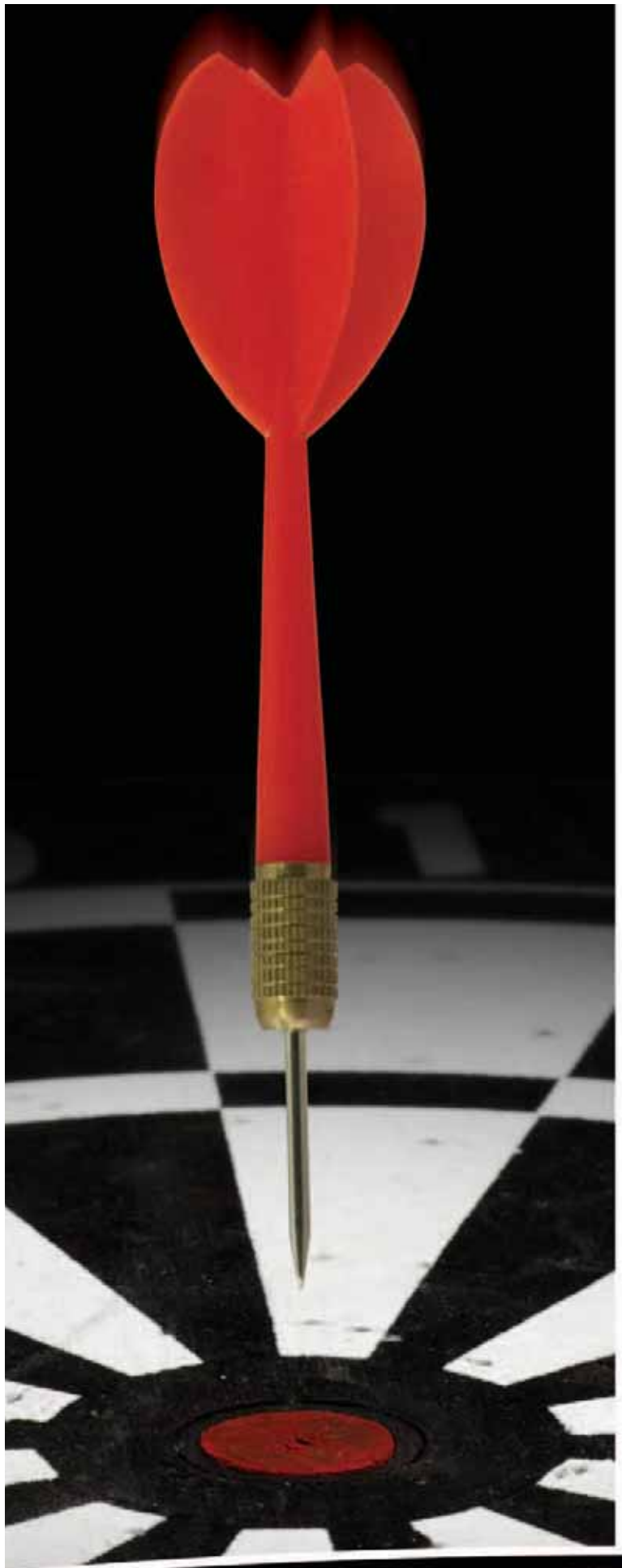

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The Year in Review… The Year Ahead

2006 was a pivotal year in the history of IP Communications. Practically all greenfield installations are now IP-enabled, and many existing circuit-switched phone systems are being modified or replaced with systems that can deal with both the PSTN and IP networks. 2007 will give us more of the same, along with new technological advances in wireline and wireless communications, and applications having myriad new features.

With the new IP technology came a new crop of buzzwords and terms. Web 2.0 was joined by the somewhat more nebulous Web 3.0. As one online commentator wrote, "Web 3.0 is Web 2.0+... more of what we have now, but faster and more ubiquitous." It was also linked with another term, the Semantic Web, according to Dave Linthicum. (Wikipedia says that, "The Semantic Web is a project that intends to create a universal medium for information exchange by putting documents with computer-processable meaning [semantics] on the World Wide Web." It uses XML, XML Schema, RDF Schema and OWL.) And SOA, or Service-Oriented Architecture, was on everyone's lips (though not everyone knew why).

Despite this multiplicity of acronyms and interesting terms, we saw more of the same in 2006: More Skype users, more open source (Asterisk-based) phone systems, more sophisticated wireless devices, more WiFi and dual band phones, more broadband, and more SIP-based systems, thus cementing the position of this important call control/signaling protocol.

The public continues to clamor for broadband, despite the fact that many U.S. carriers have been slow to respond by changing their infrastructure, at least by European and Asian standards. Call/contact centers began to take IP Communications seriously, even though VoIP (define - news - alert) adoption rates in such centers had just barely entered double digits toward the end of 2006.

Business-wise, we saw one IP IPO that fizzled big time (that of Vonage) and another that did extremely well but stayed under the public's radar (that of Acme Packet). One bellwether company in this industry, Cisco Systems, revealed terrific revenues — see Rich Tehrani's Publisher's Outlook on page 8 of this issue.

Video mania took hold in 2006. The public eagerly awaits IPTV, the classy, interactive PayTV version of IP video. In the meantime, however, it seems that everybody from well-known motion picture and network TV companies to teenagers and an assortment of lunatics have generated zillions of Internet videos of varying quality. Blogs have been supplanted by video blogs or vlogs. Video is even going mobile. Indeed, cell phones are becoming personal mobile multimedia and information stations, as established media companies try to repackage existing content for new delivery environments and, therefore, new distribution channels. For example, Hearst Magazines struck a deal with Volantis, a leading supplier of Intelligent Content Adaptation™ solutions, to launch mobile device-savvy versions of Hearst Magazines' *Cosmopolitan*, *Seventeen*, and *CosmoGIRL!*. The magazines will be mobilized utilizing Volantis' Mobile Content Framework™ and will soon be available on both the Cingular Wireless and Sprint-Nextel networks.

In related news, America began to fall in love with mobile broadband and the AirCard, though existing over-air connections may seem anemic when compared to upcoming WiMAX deploy-

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By Richard "Zippy" Grigonis

ments in 2007.

IMS, the IP Multimedia Subsystem, destined to yield a common service architecture for both wireless and wireline, and promising the ability to easily create and deploy a multitude of new services, stayed mostly in the interoperability laboratories. More extensive trials and deployments will appear in 2007. As they do so and the world's communications infrastructure is renewed, you'll see heavy duty computing platforms appearing in the network based on AdvancedTCA and MicroTCA form factors and running switch fabrics such as 10 gigabit Ethernet, PCI Express, and Rapid I/O. You'll even see some workhorse media servers in the form of older CompactPCI and PCI-bus technology.

Of course, the above verbiage is just one person's observations. Yours Truly decided to take his inquiry to the next level by talking to a number of well-known and respected companies in our industry, gathering together and distilling their opinions on what really happened in 2006 and how IP Communications will bode in 2007.

8x8

(news - alert) Despite the pall over the industry cast by the Vonage IPO, many service providers have been doing rather well.

Bryan Martin, Chairman and CEO, 8x8 Inc. (http://www.8x8.com) (the folks who bring you the sophisticated yet inexpensive Packet8 services) says, "During 2006, while we continued to see the adoption of Internet telephony motivated by price, we also saw consumers and businesses looking to IP Communications for new services and applications that were never available to them before through legacy network offerings. The incorporation of video and business service applications as part of the IP voice experience was prevalent throughout the year as customers began to value Internet telephony for reasons beyond the phone bill at the end of each month. 2007 holds a renewed promise that the industry will use IP Communications and the Internet as a means to develop away from the hard, closed walls of the legacy voice networks."

Martin adds, "It is my sincere hope that the regulatory community and lawmakers will also come to realize that we cannot just find ways to shoehorn past regulations and policies onto these new applications, as was done throughout most of 2006 with E911, universal service, and intercarrier compensation reform, but to really begin to think in new ways and use the canvas of the Internet to draw better, improved solutions for the communication networks, services and applications that will become the prevalent means of communication for our society throughout the 21st century."

Acme Packet

Unlike Vonage, Acme Packet (http://www.acmepacket.com) had an IPO success story in 2006. It closed its initial public offering of 11 million shares at $9.50 per share, raising about $110 million. Yours Truly remembers when (news - alert) Acme Packet's affable CEO, Andrew D. Ory, left Boston Technology and formed Priority Call Management in 1991, a leading supplier of enhanced calling and messaging solutions, which later became a division of Atos Origin. Ory's move to Acme Packet helped bring increased success to

the company.

Acme Packet's VP of Marketing and Product Management, Seamus Hourihan, says: "When looking back at 2006 and looking ahead at 2007, I see developments in five areas. First, there's Architecture. I think we're moving from IMS as dogma to what I call 'IMS pragmatism'. I like to play with acronyms. IMS means a lot of things to many different people: To service providers from a business perspective, IMS stands for 'Incoming Money Soon'. From a vendor perspective, it means, 'Install More Sh*#'. If you're on the operations side, trying to make it work, it means, 'Inflict More Suffering'. And in the background across all of this, it means that the 'IETF [Socialistic] Mindset Sucks'. As you can tell, I'm not politically correct, I'm very irreverent."

"On the pragmatism side," says Hourihan, "as my recent article on IMS security in *IMS Magazine* mentioned, IMS is basically missing security. People need to be pragmatic about how they fill those gaps. We're also seeing pragmatism in terms of some of the other standards organizations taking the 3GPP architecture, extending it and modifying it as they see fit. That would include ETSI TISPAN, the PacketCable group and MSF [Multiservice Switching Forum]."

"Again, there are many things missing in IMS," says Hourihan. "I'm working on an article basically entitled 'Does IMS Work?', and that set of concerns relates to IMS scalability when it's deployed to serve many subscribers. It also includes things like call flows and the complexity surrounding them; interactions with databases and how often they occur and if there are there better ways to do them — perhaps not on a per-call basis, but more in terms of preallocated permissions and various network elements."

"We're moving from this dogma of 'IMS is God' to the realization that it's not perfect," says Hourihan. "We've got to be pragmatic about how we deploy IMS, not only in different types of networks — cable *versus* wireline *versus* wireless — but also pragmatic from the perspective of each individual service provider in terms of where they are today and where they're going to end up."

"Second, there's Services and Applications," says Hourihan. "From an IP Communications perspective, by and large, we're still stuck in 'basic black phone service'. In fact, as I called you today, I got angry because of the number of digits I had to enter to connect to this conference call. On the other hand, in a Unified Communications IP world, I could just click on something and it would get me into the conference. And it would be a video conference."

"We're already seeing among our customer base people who aren't waiting for the deployment of full-blown IMS architectures to do some interesting stuff," says Hourihan. "For example, we have a number of providers, such as Telefonica, Mobilis, Vodafone Spain, and Chunghwa Telecom, that are offering fixed mobile convergence [FMC] services today, in the form of 'video telephony' if you will, across wireless and wireline environments. We also have many customers outside the U.S. offering a collection of rich SIP-based services, such as interactive video, today — Telecom Italia being one."

"What's interesting to me is that all of this innovation moving toward Jeff Pulver's 'purple minutes' concept, is that none of this activity really is happening in the U.S.," says Hourihan. "It's all outside. I think there are some cultural and demographic factors indicating where these services are really taking form. I don't mean to be politically incorrect in this next comment, but if you think about the people from Spain and Italy, well, they love to talk, they love to see people. Some Europeans just have a more natural inclination to embrace some of these new features offered by IP Communications, and that's one of the major drivers."

"The U.S. is, quite frankly, in the dark ages," says Hourihan. "We'll eventually start to turn the corner, but it'll be slow, propelled a great deal by the same youth movement that drives YouTube and MySpace. It's a matter of how providers market themselves."

"Third, is Net Neutrality," says Hourihan. "I think this is a non-issue. We already see increasingly the delivery of tiered network services and the emergence of federations. In some cases, the initial goals around federating will be to save money. For example, cable operators moving to federate and exchange traffic via IP to save money by keeping the traffic off of the PSTN. Some of this begins with peering exchanges, such as Stealth Communications' VPF [Voice Peering Fabric] in New York, a distributed exchange allowing members to establish peer-to-peer connections for VoIP traffic, or XConnect's peering service for over 400 VoIP service providers. The motivation to save money will change over time, and instead of just connecting everybody over the public Internet, providers will supply trusted secure services and ensure high quality end-to-end service as well. For example, how do I know when I make an IP phone call that the call actually gets from me to, say, the customer service agent at the Bank of America? And to do it over a quality connection so that when I give them my social security or account number over the phone, I don't have to repeat it ten times."

"Fourth, are Regulatory issues, the regulatory requirements on IP Communications," says Hourihan. "Looking back over the last few years at FCC regulations in the U.S., we are moving from what I call a reactive 'God forbid' regulatory environment to something that's more proactive, but still driven by 'God forbid' scenarios. This environment started when Janet Jackson had her wardrobe malfunction at the Super Bowl. Basically the outcry was, 'God forbid that my children see that again on TV'. And so we found ourselves with a new set of decency laws

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applied to broadcast television."

"The next 'God forbid' situation involved Vonage," says Hourihan, "when subscribers died in Texas and Florida because they couldn't reach their respective 911 services. In this regard, the FCC has moved from the reactive mode to the proactive mode, demanding customer access to E911 service. Also, early in 2006 they announced that all VoIP service providers must provide lawful intercept capabilities. Why? Because they're again being proactive. 'God forbid' that Osama Bin Laden uses Skype to set up his next terrorist attack in the U.S."

"There's something else on the horizon with respect to regulatory, and that's the issue of taxation, specifically state taxation," says Hourihan. "PSTN-derived tax revenues provide universal service and, more importantly, support state funds that finance such things as schools. As tax revenue from the PSTN declines, 'God forbid' we soon don't have money to educate our children. Bottom line: I don't view that IP Communications will continue to be exempt from many aspects of regulation."

"Fifth, and finally, there's Competition; that is, the competitive environment both from a vendor perspective as well as a service provider perspective," says Hourihan. "I think the trend will be increasing consolidation in both areas. From the vendor perspective we're already seeing the beginnings of this with jokes about 'Alca-cent' and 'Nokia-mens'. In the IP Communications area, we have a very fragmented vendor environment. Acme Packet partners with 13 telecom equipment makers on a worldwide basis. None of them are dominant from my perspective, and we're starting to see these 13 collapse to 11. More of this will occur over time. Our session border controller marketplace today is populated by about 20 vendors. Clearly, a mature market won't have that many players."

"On the service provider front I think things are more fragmented," says Hourihan. "In the U.S. you see the incumbent telcos such as the AT&Ts and Verizons, then there's the cable companies, and ultimately some type of third provider with a technology such as EV-DO or WiMAX, be it a Clearwire or a Sprint, will emerge as being important. The key for making IP Communications work will be the facilities. Even in a world of fiber-to-the-home or WiMAX-type bandwidth, IP Communications will increasingly support voice and video interactivity. That requires new equipment in the access network."

"There will still be Internet-based services," says Hourihan. "But again, if you're looking for trust and quality of service [QoS], you'll be looking to facilities-based providers that allow anonymous subscribers. At Yahoo or Google 'I can be a dog on the Internet', to quote that famous *New Yorker* cartoon, along with, 'Nobody knows who I am or what I am'. Some providers will differentiate themselves in that they will know their subscribers, at least in terms of who they are, where they are and what their income level is."

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Aculab

(news - alert) Aculab (http://www.aculab.com), a well-known maker of hardware and software building blocks for telecom, builds devices that must stand at the crossroads of the PSTN and IP Communications. Aculab's Sales and Marketing Director, Chris Gravett, says, "If anything, 2006 was the year when we realized that the IP market had moved beyond the hype. In the second week of January 2006, we launched our first true pure IP product, the Prosody X. That meant that we were able to start responding to opportunities that were beginning to appear back in 2005. We found that we are good at dealing with real commercial opportunities, and they are from major companies that have made the decision to release new platforms and solutions that are IP-friendly or have the IP capability built in. So we've seen companies across the world willing to invest in the technology and start planning their own next-generation releases. 2006 has very much been a year of intensive development and the release onto the market of solutions by our customers."

"It's almost unheard of now for a new opportunity to be only TDM in nature," says Gravett. "At a minimum, it has to be IP-ready, which is where Prosody X comes into its own. The other thing pertinent to IP Communications during 2006 is that it has become apparent that voice alone is not a sufficient 'sell' for IP Communications. We've come under a lot of pressure and demand to deliver a broad range of codecs, particularly addressing video and mobility opportunities. Security has also become an issue and, therefore, an opportunity from our point of view. I'm talking here about things like Secure RTP."

"So 2006 has really seen the promise of the previous five or six years actually come to fruition," says Gravett.

"Something that's happened a bit more slowly than we anticipated has been the move to host media processing and the corresponding move away from DSP-based media resources," says Gravett. "At the end of 2006, the conclusion we reach is that, not surprisingly, there is still going to be a future for DSP-based resources. However, over the next couple of years — and particularly as we move to a pure IP environment — the SMB area of our traditional market will much more be accommodated by host media processing. The demand for wideband, video codecs, and so on will ensure that there is going to be a need for higher-powered DSPs and a lot more of them. In an IP-only environment we see the need for probably AMC [AdvancedTCA Mezzanine

Card]-based DSP farms, both for the large enterprise and for the telco market. We're studying that upcoming market at the moment."

"However, at present we have not signed off on any development projects involving AdvancedTCA equipment," says Gravett. "We're very much aware that we probably should have something going in this area. I suspect that before the end of 2006, we will have embarked on one or more ATCA projects. One thing that's been holding us back is that we would like to be utilizing higher horsepower DSPs, which are only just now becoming available, even for development purposes. If we embark on an AMC development, then it's not a good idea to use today's DSP technology. But I envisage that we will have development projects underway by end of 2006 and the beginning of 2007. We're certainly heavily involved in the technical and market research to bring that about."

"One question we have to answer is whether the density that we'll likely to be able to achieve using DSPs will exceed what can be achieved with host media processing," says Gravett. "The question marks surrounding host media processing concern not just the density in terms of processor power, but the footprint size and heat considerations when one builds top-end systems. That's an area where we'll spend a lot of time comparing the pros and cons before we embark on what will be a big investment for Aculab, the move into the ATCA arena. My personal belief is that our entry into the ATCA market is inevitable. It'll be sooner than later."

BEA Systems

Mike McHugh is VP and General Manager at BEA Systems (news - alert) (http://www.bea.com). He's responsible for driving the WebLogic communications platform for enterprise applications and SOA (Service Oriented Architecture) — which includes BEA WebLogic Server® 9.2, BEA WebLogic Portal® 9.2, BEA WebLogic® Integration 9.2, BEA Workshop™ for WebLogic 9.2, and BEA JRockit® 5.0.

"VoIP isn't 'the thing' any more, simply because VoIP has pretty much become mainstream," says McHugh. "This year, it wasn't so much asking 'Is this stuff going to happen?', it was more like, 'How do we leverage it now that it's here? What are all the new services?' You go to expos and there's hype around new services. The good news is that this year we're beginning to see those services."

"Here in San Francisco," says McHugh, "Comcast is a local cable provider, and they're running radio ads about triple play. 'Sign up here for your $69.95 triple play' and they actually use the term 'triple play'. So even the terminology is becoming mainstream."

"Fixed/Mobile Convergence [FMC] was good talk but not 'real' until all the players came on board," says McHugh. "So you've got Sprint/Nextel, AT&T, BellSouth, Cingular, and some of the new entrants that are going to make triple or quad play real. The whole IP video field also made a big impression this year, such as Google acquiring YouTube. It all underscores the arrival of IP-based capabilities and the fact that VoIP is old news now. This year we saw the emergence of the push to identify what to do with IP Communications now that we have it. What kind of increasing richness can we offer in the more interesting applications as they become mainstream?"

McHugh elaborates: "This year BEA started 'beating the drum' about how you go about leveraging IP and how enterprises and operators are going to offer services and what's that going to look like. We realized we had some ideas about what it takes to build platforms that run these things. As IP comes online, and the Internet and many forms of communication merge, we see the emergence of some very familiar paradigms of what it takes to build these. At least it's familiar to us, having lived through the Web transformation over the prior decade. Some of the data and services management paradigms emerging we think are directly applicable to IP. That includes concepts as IT-sounding as SOA — the service oriented-architecture — that enablement of services reuse and services infrastructure use. It's something we very much believe in and we started beating the drum for that in 2006 too. Next we've got to deliver on all of this and show with 'proof points' how it works."

"As for 2007, there are two elements to 'what's next'," says McHugh. "There's the infrastructure for building it, and then there are the services that might use that infrastructure, both for consumers and the enterprise. You see common applications at the shows, such as gaming-type applications, and in the business space they tend to be more person-to-person collaboration-type communications enablement or extensions to traditional collaboration business-type applications. We think that the increasing pace of arrival of these services and the demand for services drives the value, but, in our view, it will take some rational infrastructure to pull this off. If you're sitting at home surfing or writing something, you're not thinking of the network underlying that IP system. It doesn't matter if the transport is cable or DSL or whatever. What matters to you is that the service is available and what you can do with it. "

"We'll see new infrastructure and cost models that enable quick time-to-market, easy development and deployment," says McHugh. "It's the notion of throwing a lot of services at the wall and seeing what sticks. The cost of failure can't be very high, because if the service doesn't 'stick' or find favor with users, then you've got to throw it away and move on to other services or other combinations of services, until you find something that works for you."

"We believe that communications will become highly personalized," says McHugh. "When I talk to you, I don't want to look up your phone number. I want to talk to you. That idea could result in an application where the system calls you on your IP phone or multi-

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mode phone or cell phone, or it sends you an IM because you're in a meeting."

"Ultimately, it's all about presence," says McHugh. "What IP address are you at? What devices are there around you? How can they be exposed in an application? How are they made transparent to an application? The guy who built the service doesn't want to deal with all those things. It's exposed APIs or Web services that enable session establishment. That kind of easy service development is our play, our vision for moving into IP and converged services."

Covad Communications

(news - alert) Perhaps the best-known of the CLECs, Covad (http://www.covad.com) has been 'riding the wave' of improved IP Communications quality and a diversification of services that SMBs increasingly find tempting.

Eric Weiss, Covad's Chief Marketing Officer, says, "In 2006 Internet telephony and IP Communications really graduated to Business Class. Some examples of how we tried to contribute to that would be that we rolled out and scaled things such as voice prioritization and the ability to prioritize real-time applications over all of the other data-type applications. With the YouTubes of the world out there taking a lot of bandwidth, we've got to make sure that the real-time business class applications such as VoIP still maintain their business 'grade'. So, we have a technology and service called VOA [Voice-Optimized Access] that gives you voice priority over data, and we have a number of features available through our Covad Dashboard and our Portal that enable a whole suite of applications such as Find Me/Follow Me, Unified Communications, Unified Messaging, Rich Conferencing, and so forth. We enable those features bundled with the voice."

"This, in turn, speaks to where things are going in 2007," says Weiss, "which is not to market these solutions as 'VoIP', but to market them as IP Communications. It's integrated communications, and the fact that it's called VoIP just means that IP enables all of the features; take for example, what we put in our Dashboard and Portal."

Weiss elaborates: "So, in 2006 we graduated to Business Class with those features, with QoS as per VOA, but I still think that 2006 was primarily about the well-funded enterprise users, the early-adopters and the people either moving or doing greenfield deployments. That's what really characterized IP Communications in 2006. That's going to transition in 2007 where we'll basically be done with the early adopters. We'll stop calling it, marketing and selling it as VoIP, and instead we'll start marketing it as what is really is: as communications, as collaboration. That may sound simple and 'vanilla', but that's what the broader market of SMBs wants and needs. And we're going after that market."

"Business Class IP Communications is now a better alternative — even for the installed base — in terms of cost, productivity gains, the features, and the need to replace Y2K PBXs, and not just for moves, greenfields and early adopters," says Weiss. "Our focus on SMBs drives us toward providing tools that help people sell more widgets, bill more hours, see more patients, and so forth."

"We found that SMBs don't tend to buy technology," says Weiss, "but they do want communications to help them. If they're a law firm and their top customer calls them, they want to be able to have that client find them wherever they are and similarly automatically block a caller who's merely trying to sell them more paper clips. They want to grow their business, and the only way they can do it is with advanced tools, which is what we've built into our offerings."

"So, that was the primary transition: from early adopters to practical users who are not buying technology — namely, VoIP — they're actually buying 'communications' that helps them get their job done and grow their business," says Weiss.

"Also, in 2006 there was a lot of confusion in the market about 'who to go to for what'," says Weiss. "There was no category leader in the SMB communications market. Vonage was out there, as well as Skype, and cable companies, traditional telcos, PBX manufacturers who even sold in the retail chain, and then competitive providers such as Covad. The buyers were pretty confused about who to approach. That will change in 2007. There will be a clear category leader, particularly in SMB VoIP and IP Communications. To be such a category leader, the company must exist nationwide, so that as SMBs grow and establish branch offices they can be served by the nationwide option. Second, the category leader must offer services or technology with high QoS. Third, it must be an innovative company, which generally doesn't describe phone companies. Fourth, it must be flexible enough to address the needs of SMBs. In fact, it should preferably be someone focused on SMBs, since it's difficult to deal with both SMBs and enterprises, and that means that you're not actually focused. Fifth, it should support both a hosted model and a model that allows for integration with customer premises PBX equipment. Both models are valid."

"There will be category leaders in each market segment," says Weiss. "Obviously, we at Covad think we'll be the category leader in SMB VoIP. We're already the Number One provider in hosted PBX solutions and we think we're well-positioned. That's good for us because there will be a shakeout — more mergers and acquisitions. It's hard to make a transition from wholesale to direct sales. One very large wholesaler that just made a very large acquisition talked recently about how they're now moving into the SMB market. That's easier said that done. We now have close to 40 percent of our business derived from the direct Covad-branded service for SMBs, and to achieve that took a great deal of time and effort — we've

been working on it for two years now. You have to really make an effort to transition your business from wholesale to direct. It's nontrivial. But we're over the hump now."

"Yet another trend appeared that's also interesting," says Weiss. "It concerns the channel. In 2006, agents and dealers, for example, really proved that they could handle both the telecom and IT sides of the business. The channel converged just as the technology had converged a couple of years previously. We have several hundred channel partners out there and we're seeing really strong growth. Our channel partners can deliver on the promise of IP voice and data and combined services. That really positions us well for growth in 2007."

Covergence

(news - alert) Rod Hodgman, VP of Marketing at Covergence (http://www.covergence.com) says, "I expect to see a shift in the VoIP marketplace in 2007 as users begin to move beyond VoIP to other real-time services. Today's VoIP market could be characterized as single service — voice — with the user experience being delivered over a 50-year-old TDM phone. But 2007 will mark the beginning of a significant transformation. Service providers are testing pre-IMS deployments that deliver multimedia services — voice, video, IM, and presence — to any device that supports the SIP protocol. This means they will face new challenges in the areas of scaling access, securing the service and managing the environment."

"At the subscriber edge," says Hodgman, "service providers will need to be able to predictably scale hundreds of thousands to millions of active endpoints. They will also need to scale phone registrations and fully encrypted, validated and authenticated user connections without impacting performance."

"Security will also get significant attention in 2007," says Hodgman. "The SIP protocol is the standard for access to real-time services and as it proliferates in clients, softphones, handsets and mobile devices, like all other IP protocols, it will come under increasing attack. Service providers will have to ensure the authenticity, confidentiality, and integrity of subscriber communications, and they will have to defend against attacks and compromises such as DOS attacks, service theft and others."

Covergence offers a new kind of dedicated appliance for VoIP service providers and their SIP networks. Called Eclipse, it connects to SIP-based VoIP and real-time services (e.g., voice, video, instant messaging), providing a unified security and management solution for SIP at the subscriber's edge of the carrier's network. Eclipse sits between the subscribers and the service provider and guards the network from attacks similar to those that are often seen with other application-layer Internet protocols, such as HTTP and SMTP, but are only now starting to appear with some frequency with SIP. Eclipse can also handle signaling and real-time media streams separately.

Aside from security, Eclipse can also manage inter-service the interactions and upports application interoperability. Eclipse transcodes among various vendors' SIP/SIMPLE dialects and allows for cross-domain presence visibility and messaging connectivity. For example, with Eclipse, providers can achieve interoperability between IBM Lotus Sametime and Microsoft's Live Communications Server (the latest incarnation of which is now called the Office Communications Server). Eclipse enables message and presence sharing between such different applications. Moreover, Eclipse enables administrators to define security, control and monitoring policies enforceable on all cross-domain collaboration traffic.

"SIP is the prime component of IMS," says Hodgman, "and so we'll be seeing some actual deployments of IMS in carriers and service providers next year and beyond."

Dialexia Communications

Ahmed Aina is CEO of Montreal-based Dialexia Communications (news - alert) (http://www.dialexia.com), which provides advanced voice and data over IP switches for small carriers, ITSPs, phone retail outlets and for VoIP telephone systems for SMBs," Aina says. "Over the past year, we have seen that combined with the globalization of the economy, the markets, and the deregulation of international communication, the workmanship of digital network technologies in IP shows us that the epoch of telecommunications monopolies has past. The future now belongs to more open and approachable digital technologies."

"The convergence of voice, video, and data over Internet Protocol is now creating a market for tomorrow's telecoms valued at several hundred billions of dollars," says Aina. "Barriers to participation have fallen and the big players are now positioning themselves over the new IP-based digital telecommunications network. There are higher risks if they don't offer added value and clients are more and more demanding and require quality service."

"It is now a question of when IP telephony will be adopted, since the key issue today is when to implement and how to manage the migration to converged networks," says Aina. "The reasons for rise in demand are: the emergence of business VoIP as a new and viable solution; the massive growth of the Chinese telecoms market and developing countries; the purchasing cycle to replace 'Year 2000' or 'Y2K' time-expired equipment; and lower costs of VoIP calls. All these factors have been expanding market growth into the next year."

"In the past year there have been world-class achievements in the convergence of voice, video, IM and data," says Aina. "VoIP development has shown steady growth and progress, especially in the demand for Hosted IP PBXs *versus* the premises-based IP PBX market."

"In 2007 larger enterprises will show

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increasing interest in Hosted options," says Aina, "since they can support more users without an investment in equipment and IT staff. There will also be a marked growth in the momentum of on-site IP PBXs, which appeal to small and medium-sized businesses due to their advanced features, such as call logs, voicemail, find me, follow-me, and conferencing. The outcome will be that companies will continue transitioning from their legacy TDM systems to fully embrace VoIP technology. What we envision in the near future for IP Communications is a new direction in enterprises moving from do-it-yourself software installations on their own hardware, to purchasing pre-loaded IP PBX appliances. This will become an emerging trend, since configuration, deployment, maintenance and support are much easier to achieve successfully using these high-performance, reliable and easy-to-use turnkey devices."

"In the past five years there have been many players, but in 2007 we will see a big shakeup of the industry, and only the most robust and solid products and companies will remain," says Aina.

Dialogic Corporation

After ten months of searching and (finally) negotiations between Intel and Eicon — which resulted in a sale of assets to Eicon and a name change by Eicon — the legendary computer telephony board maker Dialogic (http://www.dialogic.com) made its reappearance in 2006. I sincerely hope they will once again throw the same kind of spectacular parties for editors that they did when Howard Bubb ran the company!

In the meantime, Yours Truly asked Dialogic's (news - alert) VP of Product Management and Planning, Jim Machi, how IP Communications has progressed over 2006.

"Very well," Machi responds. "In fact, I'm sure there are many consumers out there using IP Telephony and they don't even know it. It's entered the mainstream. Continued improvements in availability, reliability, and redundancy in both the enterprise and service provider space coupled with enhanced voice coders have dramatically improved users' quality of service [QoS] and overall experience. Solutions addressing E911 and Security are abundant. Increased convergence driven by broadband everywhere has increased potential consumers. And lastly, the Session Initiation Protocol [SIP] is and will continue to play an enormous role in IP telephony networks. Standardization is the obvious benefit but, more importantly, SIP has moved forward real-time multimedia: voice, video, and most importantly Web collaboration solutions."

"2007 will bring innovation in the application space as providers need to 'subsidize' falling voice revenues," says Machi, "so look for more enhanced services driven by IP such as presence and collaboration solutions. Hosting will gain even more ground as more robust and 'easier to deploy' telephony hosting solutions provide an attractive alternative to CPE equipment. Providers will also move toward IMS or IMS-like platforms realizing reductions in total cost of ownership."

Interactive Intelligence

(news - alert) "Large scale product adoption is always sparked by some disruptive technology or product introduction," says Joe Staples, Senior VP of Marketing for Interactive Intelligence (http://www.inin.com) a company that's familiar with disruptive product introductions, as it knocked the computer telephony industry (and especially the old PBX, ACD, and VRU vendors) for a loop way back in 1996 when it unveiled its Enterprise Interaction Center (EIC), a comprehensive LAN-based communications system that acts not only as the PBX, but also provides automatic call distribution (ACD), interactive voice response (IVR), fax services, a Java-based workflow engine, and voicemail integrated with Microsoft Exchange.

"In 2007 we will see a big shakeup of the industry, and only the most robust and solid products and companies will remain."

"VoIP is that disruptive technology that, over the past year, has gained significant momentum and caused companies to reevaluate the TDM-based systems that they deployed years ago," says Staples. "It has caused them to look at what else they can do, how they can compete more effectively, and how they can improve efficiencies. That reevaluation of their telephony systems, again initiated by the introduction of VoIP, has turned into a strong increase in purchases. We're in a dramatic upward cycle right now. VoIP, SIP, and the associated applications have given customers a reason to buy. I also think we are at the beginning of the cycle and that we will continue to see strong growth for the next several years."

Interactive Intelligence should know. Their year-over-year revenues were up 46% last quarter.

Inter-Tel

Jeff Ford, CTO and President, Integrated Systems, of Inter-Tel (http://www.inter-tel.com), has been with company since 1983, his senior year at Arizona State University. He has seen many trends in telecom come and go.

"Clearly, the last half of 2005 and coming into 2006, we saw what Rich Tehrani called 'first-generation VoIP' capabilities," says Ford, "which is basically VoIP as a new technology — compared with TDM — for transporting voice. It clearly matured out there in the marketplace. We've gone from dealing with the early adopters to general and mature acceptance of the technology and that first-generation VoIP capability. We continue to see accelerating adoption of VoIP."

"Inter-Tel traditionally focuses on the less than 500 user per site market," says

Ford. "We're clearly selling to the SMB space. If you take a look at the deployment of IP in the SMB space, it's generally 10 or 15 points behind the overall industry, but it's tracking and increasing every day, and the technology has clearly met mainstream capabilities. When people buy new systems, they're now expecting them to be IP-capable. The majority of SMBs are still purchasing digital phone capability, but they want to have an IP-capable system and they're deploying some IP features and capabilities."

"Over the last couple of years, Inter-Tel has pushed forward with its collaboration and presence capabilities," says Ford, "and that has reflected nicely what's been happening in the market. We introduced our Unified Communicator product in 2003, which is the hub of our presence management technology in collaboration and then we've introduced Web conferencing and desktop video capabilities, integrated with that same platform over the last year. We see these capabilities as the foundation for the beginnings of second-generation VoIP systems that are just now being introduced. These rely heavily on presence, collaboration, SIP and open standards. Instead of just talking about voice transport such as VoIP, we can now talk about business-enhancing applications enabled by various IP applications including VoIP. These will really help drive business value, helping to increase revenues or decrease costs, improve efficiencies and improve customer service."

"We see 2007 as the year that second-generation technologies and systems really take hold and move into the mainstream on their own," says Ford, "where customers are looking for open standards platforms with integrated presence management, instant messaging, and other business-enhancing applications."

Ford elaborates: "After all, everybody for the past several years has talked about the fact the real value of VoIP is not in how you transmit the voice, but instead are the applications that get IP-enabled. We're biased, I'm sure, but we feel that we've been delivering many of those applications over the last several years and we've been leading in the introduction of presence-based technologies and integrated messaging capabilities, presence management, advanced call routing based on real-time presence capabilities, desktop sharing, application sharing, collaboration, desktop video, and delivering a richer multimedia environment with our Unified Communicator and collaboration technology, along with our Axxess solutions."

"Our Inter-Tel Axxess 7000 product will be released very shortly," says Ford, "and that has many of those capabilities built right into the product's core. The 7000 is at its core a SIP softswitch so it's an industry-standard SIP offering that supports SIP-B [which has the benefits of SIP with the feature functionality of MGCP] and B-TXML [Basic Telephony Extended Markup Language] industry standards for phone control. The 7000 also has presence capabilities, collaboration, secure IM, and desktop video, all built right into the offering's core, as opposed to being sold as an optional 'box'. Once again, we feel the 7000 product is out in front in terms of introducing these features. In 2007 we expect to see market acceptance of these features to such an extent that the public will expect them to be an integral part of communications products."

Juniper Networks

(news - alert) Juniper Networks (http://www.junipernetworks.com) has played heavily in the service provider space and its equipment transports all sorts of traffic, including IP telephony, over the world's networks. Back in 2004, Juniper Networks started to enter the enterprise space, and one of the key things they did was to acquire NetScreen, and subsequently they made other acquisitions, such as Peribit Networks, a developer of WAN optimization technology, and application front-end vendor Redline Networks that operated in the applications acceleration space. They also acquired Funk Software for identity management and access control capabilities.

Juniper's Senior Director of Product Marketing, Stephen Philip, says, "Over the last year or so, Juniper has maintained its focus on service providers but it has also embarked on an enterprise strategy. Most elements of that strategy are interesting from an overall point of view, but some elements are interesting from an IP telephony point of view. Recently, for example, Juniper has announced a strategy to go after the branch office market. We're also announcing some development plans and some initiatives for this space. For example, we're rolling out new versions of the J-series, Juniper's line of access routers, in particular the J4350 and J6350 enterprise routers. Of course, 'branch office' means different things to different people. It ranges among the micro-branch, telecommuters, and small office, up to the branch and regional office."

"Throughout the summer of 2006 we also rolled out a new portfolio of security appliances," says Philip "and as we roll out the new platforms, we're leveraging some of the technology between them. The branch solutions include 11 new Secure Services Gateways [SSGs] security platforms with integrated branch routing and full Unified Threat Management [UTM] capabilities and the new J4350 and J6350 enterprise routers that leverage technology from the Secure Services Gateway 500-series platforms. Our Secure Services Gateway Platform is an integrated security appliance with a firewall and VPN connecting back to central headquarters."

"There's also some additional management work that we're doing, in terms of developing an integrated suite of management applications to control the systems in the enterprise space," says Philip. "And also some customer service initiatives to aid enterprise transitions."

Sanjay Beri, Juniper's Director of Product Management, says: "One technology you'll be hearing a lot more of in

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2007 are 'Application Accelerator' WAN optimization platforms, such as our Juniper WXC 250. Application accelerators are a scalable approach to accelerating application delivery over the WAN. It helps businesses improve application response times, maximize WAN investments, and control and prioritize key applications. Ultimately, the WXC WAN optimization capabilities will be integrated into the J4350 and J6350 routers to provide compression and caching, TCP and application-specific acceleration, and visibility and reporting functions. The integration will be achieved via a WXC services module to leverage the core functions of the J4350 and J6350 to provide an integrated set of QoS, bandwidth management and multi-path functions. Standalone branch J-Series and WXC platforms will continue to be available into 2007."

NexTone

Nick Turner is VP of Product Marketing for NexTone (news - alert) (http://www.nextone.com), makers of the IntelliConnect™ System that includes such edge devices as the NexTone SBC (Session Border Controller), NexTone MSX (Multiprotocol Session Exchange platform for interconnecting SIP and H.323 networks), and the NexTone IMX (IP Multimedia Exchange platform for interconnecting IP and IMS networks).

Turner says, "We've seen tremendous growth, in terms of the number of carriers deploying VoIP, the 'amount' of VoIP that they're handling, and the increasing awareness of the importance of SBC-type products in their networks and service deployments. If you look at the market numbers, they tend to confirm that the SBC space is the fastest-growing in the sector. And in the future, we expect not only continued growth but perhaps an increase in growth as SBCs or SBGs — session border gateways, to use the IMS parlance — becomes more of a known quantity and necessary element to network design."

"The question arises whether SBCs and SBGs will retain their essential character or morph into something else," says Turner. "If you look at the MSF GMI [MultiService Forum Global MSF Interoperability Event] press conference, the participants all highlighted the fundamental need for a session border gateway to provide security and interworking at the boundary points of an IMS network. So its need is becoming 'better comprehended' instead of minimized."

"The terminology itself will also probably evolve," says Turner. "If you look at the 3GPP or ETSI TISPAN framework, you see lots of delightful acronyms: BGF [Border Gateway Function], BCF [Border Control Function] and new ones evolving such as I-SBC [Interconnect Session Border Controller]. So as we get closer to field deployments and larger scale deployments, the terminology will evolve as real world issues challenge the original design assumptions of IMS. A good example might be the I-SBC; in an IMS architecture document, the I-SBC is made up of functional components such as IBGF, IBCF and IWF. The clearly laid out functions are, from ETSI TISPAN's perspective, things that can be consolidated into a single product implementation. Thus, it is an 'implementation' of multiple ETSI TISPAN functional capabilities. Those acronyms can be considered as just functions, and now we're seeing new product implementations arise that are organizations of those specific functions and features. A single product can span a number of functions."

"I think that 3GPP and ETSI TISPAN are clear as to what a function is *versus* a product," says Turner, "and again, as we get closer to field deployments and larger scale deployments, we see real-world feedback help drive order and product implementations."

"On the OSS [Operations Support System] side," says Turner, "the reason why NexTone developed RSM [Real-time Session Manager, which acts as a centralized policy manager and enforcement point to manage network resources and optimize call distribution] was to deal with the reality of real-time feedback on network performance at a traffic or call flow level, not at the device level, because devices aren't really relevant. This occurs in real time so that when something breaks — and in telecom, things break — the network operators are made aware and can perform either measured manual intervention or automated intervention to adapt around network problems."

"What the SBC vendors have proved that there are many difficult performance issues for any type of network element at the network boundary," says Turner. "The SBC vendors in this space have proven an ability to process large transaction loads, both signaling and media. They've got a good two-year lead on other types of vendors in those respects."

"There are also new architectures and implementations being discussed actively," explains Turner. "For example, there's the basic concept of 'dissociated architectures' where an existing signaling entity, such as a softswitch, can control a media-only SBC. That's a credible architecture and NexTone has adopted that from the beginning. We adopted and implemented a dissociated architecture when we shipped our first product. But this leads us back to the same performance problems we have in all types of networks, certainly voice networks, where calls per second and busy hour call attempts are an issue. SBCs or whatever controls them must deal with that at scale. So we look at various labs, such as CT-Labs, where they can measure the performance of an SBC, and you still see that terrible legacy come back at us, which is: how many calls per second can be handled? Under duress such as a denial-of-service attack or just in plain sailing on the network, SBCs in general, and NexTone in particular, has proven effective at handling high transaction loads. We'll continue to keep pace with

future network growth."

"The other unique attribute of the SBC space in general and NexTone in particular, is that we've been sweating out problems in the field that weren't anticipated in abstract, whiteboard environments, and which are necessary to solve in order to deliver a production network for a carrier," says Turner.

"Security is increasingly allied with SBCs instead of separate firewall boxes," says Turner. "SBCs have become the nexus for certain kinds of security approaches. If we go back a few years, SBCs were considered a nominal space with limited time to live. But what happened in 2006 is that SBCs have become both a known commodity and an understood and appreciated function in the network. It's a core competency area."

"The shape, form, and future of SBCs are open to great debate and discussion," says Turner. "What will prevail is the real-world experience aspect — we're dealing with a new type of network architecture. When we look at IMS, it's a wonderful design and it certainly has its specific benefits, but those abstract concepts have yet to meet sufficient field-level experience for anyone to know what will break in specific scenarios. SBCs have been, to put it mildly, tried and tested. And that's been the reason for their significant core competency development. They will continue to flourish in 2007."

Nortel Networks

(quote - news - alert) Phil Edholm, Chief Technologist and VP of Network Architecture at mighty Nortel (http://www.nortel.com) says, "From my perspective, 2006 was a significant year in about three different ways. From a company perspective, we reached the turning point where the volume of VoIP and related forms of IP Communications are now the majority of our business. That was a big transition. Obviously, a major occurrence in the industry has been the adoption of VoIP and the challenges in some customer environments of actually finding the value proposition in the world beyond the proven TDM environment. This year, we saw that transition happening."

"The second major IP Communications 'impact of the year' was the ICA [Innovative Communications Alliance] announcement," says Edholm. "In July 2006, Microsoft and Nortel announced a strategic alliance at technology, marketing, and business levels involving a shared vision of unified communications. [Editor's Note: The two companies formed the Innovative Communications Alliance (http://www.innovativecommunicationsalliance.com) as a 'go-to-market' vehicle.] There's been a transition happening of communications moving from being a separable environment to being part of a collaborative space. In a collaborative space, you have to bring three elements into play: First, management of documents, content, information — the things that you're going to collaborate about; second, the integration of workflow — when you're going to collaborate and what's going to bring you together to collaborate; and third, the modalities of communication which may range from instant messaging [IM] to voice and video in real time, but including other things too."

"By bringing these three things together, one can create an environment for this transformation around collaboration," says Edholm. "There's also the recognition that this is a new and different marketplace. It's actually changing the definition of telephony from a voice communication system to making it a part of a larger collaboration environment for knowledge workers, who are obviously a small percentage of today's workforce, but a growing percentage."

"So, from our perspective, the ICA announcement with Microsoft is a recognition by Nortel that this collaborative knowledge worker unified communication environment is going to become a significant force in the industry," says Elholm, "and it would have two impacts: it will have a significant impact on many companies in terms of how they build and integrate their telephony environments over the next several years, but it will also affect companies that are predominantly staffed by knowledge workers, such as consulting companies. This will become the standard paradigm of communication in those environments."

"Nortel recognizes this," says Edholm, "and Microsoft recognizes that if you want to build a collaborative suite into your products that handles document management, workflow and the extended workflow environment through their relationship with SAP, then it's very difficult to do it alone without working with a company, such as Nortel, that has expertise in real-time communications. So I think the ICA announcement was in many ways the pivotal event of 2006 in terms of redefining the market space from being an IP Communications marketplace to being an IP Communications environment integrated with these other collaborative tools in a whole new transformation of the market."

"The third major area is the path over which we're traveling," says Edholm, "with our announced direction and changes in our product portfolio concerning our use of conferencing as the underlying communications paradigm of our applications suite. So, instead of having conferencing being an adjunct to communications, it becomes *the basis of communications*. Instead of me making a connection between my device and your device, we actually base the communication on joining via a conference facility. You could implement that in a call center, for example, where you bring the customer in and tether them in a conference with a customer service representative. It's the first presaging of this next transformation in communications, where conferencing becomes the fundamental communications paradigm."

"What we've seen this year to back up that idea is that we at Nortel sold a large number of VoIP conferencing systems as

part of our VoIP offer," says Edholm. "Those sales resulted in an explosion in two-party conferences, because people realize that the probability of a meeting occurring if I say, 'I'll meet you in a conference' is much higher than if I say, 'I'll call you', but when I do call you you're on the phone and then you call me back and I'm on the phone and so the meeting never happens. The conference paradigm is, thus, a way of not guaranteeing but certainly increasing the probability of a meeting actually occurring."

Edholm sums it up: "So, to recap, these are the three predictors of where we're going: The fact that VoIP has moved from being a kind of data curiosity to the predominant way that real business telephony is deployed. The second is the whole conferencing arena, but the single biggest event in the industry this year was the debut of the ICA, which heralds the transformation of IP Communications from a standalone technology to being integrated into a true application structure through document management, workflow management and integration, by working with companies such as Microsoft. That's really going to be a major transformation."

pbxnsip, Inc.

"The past year for selling software based IP PBXs has seen a lot more successful deployments according to Kevin Moroz, VP of Sales at pbxnsip (news - alert) (http://www.pbxnsip.com), makers of a virtual PBX that can connect directly to an ITSP or a customer premises PSTN gateway.

"The market is yearning and searching for robust, feature rich, easy-to-use systems," says Moroz. "We have had thousands of downloads of our product this year and obviously expect even more next year. The lab trials and viability phase is over and now the widespread deployments are taking root. We are finally seeing multiple sites and 100+ user phone deployments become more commonplace. The hosted PBX market is bubbling up even more as small companies all want to be the next Vonage and are deploying systems all over the world as quickly as possible. The key to more explosive growth is keeping SIP highly interoperable. The market loves to be able to pick and choose their IP phones and gateways as well as their own Internet Telephony Service Providers [ITSPs]. We need to keep educating the market place and 'eating our own dog food' as we say, to keep the market growing."

SpectraLink

2006 also saw new inroads by WiFi phones and the beginnings of dual and triple mode technology. SpectraLink (news - alert) (http://www.spectralink.com), for example, specializes in workplace WiFi wireless telephony, offering seamless integration of wireless VoIP and traditional telephony platforms.

SpectraLink's Vice President of Marketing, Ben Guderian, says, "Looking at this past year, there were things certainly occurring specific to the wireless space. For example, the 802.11e standard for WiFi quality of service [QoS] was finally ratified. People were happy that it was done, though it didn't have a huge impact in terms of what we're doing since we (and others) had already dealt with finding ways of doing high quality IP telephony over wireless."

"Much of the energy that we put into this that's unique to us in the wireless space has to do with the compatibility issues involving the various access points that are out there; this adds a whole other layer of complexity on top of what everybody else has to deal with in the wireless IP telephony world," says Guderian.

"The other thing that we've moved toward and that we'll see a lot more of in 2007 is more support for many of the switch platforms that are running SIP," says Guderian. "To date, SpectraLink has primarily focused on large enterprise customers and much of what we do goes into TDM switches, and a lot of the stuff we sell goes through our OEM partners that have their proprietary IP protocols, companies such as Nortel, Avaya, NEC, Alcatel, and so forth. We even support the proprietary offerings from vendors such as Cisco and Mitel."

"We need to keep educating the market place and 'eating our own dog food' as we say, to keep the market growing."

"This past year Cisco came out very strong, talking about support for SIP, along with others," says Guderian. "So we will most likely see a shift — not overnight but over time — moving away from proprietary protocols such as Cisco's SCCP or Skinny Client Control Protocol [used between Cisco Call Manager and Cisco VoIP phones] into more SIP-based technologies. Of course, everybody's going to have their own flavors of SIP-enhanced extensions too. That's certainly where we're seeing things moving, and we're taking that into consideration as we develop new products."

"Also, this year we did some prototyping and some demonstrations of some softphone applications as a means to show how you could get a third-party wireless device to work with not only an IP PBX, but more importantly, with TDM technologies," says Guderian. "I realize that, in the context of Internet telephony and VoIP, this may appear less interesting, but it certainly got the attention of many customers who are trying to squeeze a few more years of useful life out of their TDM switches. It leverages what we do in terms of making the client device more of a thin client and taking advantage of the server or gateway we provide to do the PBX integration."

"We're not trying to force anybody to go in any direction and so what really drives us is making sure that we're compatible with what the customers are trying to use, and sometimes that makes us a bit 'old school', because we still main-

tain a great deal of TDM support," says Guderian. "The reality is that the markets we serve are still populated with TDM switches."

"There are many cell phones and PDAs out there today that support both cellular and WiFi," says Guderian. "These are the kinds of devices to which we're targeting our softphone, but, interestingly enough, many of these devices do a very bad job of supporting voice on the WiFi side. It's getting better, because everyone's starting to realize that WiFi radio might be useful for people wanting to use an IP telephony service — perhaps even Skype — from home or a hot spot. Generally, those devices have required a fairly high knowledge of how everything goes together in order to make them work correctly. Again, a lot of the IP telephony things out there today require a bit more knowledge than the average consumer has to get them to work. And then you layer on top of that the wireless piece, all kinds of variability, and issues you must deal with, such as whether it will work okay on your home network, corporate network, or a T-Mobile hot spot. There are a lot of 'interesting' things that can happen because you're faced with different levels of security, and different user authentication things are going on. So the issues go well beyond making the voice stuff work over WiFi, and then over the broadband connection; sometimes it has to do with just getting the device up and running on the network."

"In 2007 we'll see more Voice over WiFi used in places where the company is comfortable with it and it's mission critical," says Guderian. "The best examples of that are the big home improvement chains, both Lowe's and Home Depot have pretty much standardized on the technology. You can add to that many big hospitals and manufacturing plants. Many of the early adopters of WiFi and people who installed wireless LANs to help do other things, such as barcode scanning, are way up front in supporting voice on the networks. However, Voice over WLAN is still very much in its early stages as a consumer play, just because it isn't really plug and play yet. In the enterprise, you need a pretty savvy IT staff today to make it all work. We make it as plug and play as possible because we provide all of that extra PBX integration and so forth. But what we do doesn't necessarily translate that well over to the consumer world, at least not yet."

Sylantro Systems

(news - alert) Sylantro (http://www.sylantro.com) is a leading provider of software used by service providers to deliver hosted VoIP applications and services for business, consumer, and wireless customers.

Syltantro's Senior VP of Global Marketing, Ron Raffensperger, says, "From Sylantro's standpoint, a couple of interesting things happened this year. For example, IMS started to become real. It's beginning to move from the labs into early trials. Also, consumer VoIP really started to hit the mainstream this year. We've seen huge growth in acceptance from several of our customers."

"Also, we started to see examples of seamless mobility this year," says Raffensperger, "but I don't think it will really get going until next year. Some of that is sorting out, involving the availability of dual mode handsets, the availability of full PBX functionality on a mobile phone. You got a hint of them this year. I think they'll be major players next year."

"Will session border controllers retain their identity in an IMS world?" asks Raffensperger, "I think they'll pretty much stay the same. There are a few little twists, but generally speaking SBCs will continue to be a fact of life just because the carriers need to protect their networks."

"There are a number of speed bumps on the road to IMS," says Raffensperger. "We'll see them in mobile first, because that's where IMS was originally defined. And we're seeing a lot of them in greenfield installations. We've got an installation in Pakistan with Motorola that's being turned up as we speak, and that's a great one for IMS because it's a greenfield — there was no 'last mile' because there was no existing infrastructure."

"One uncertainty we'll confront in 2007 is whether or not IMS becomes a reference architecture," says Raffensperger. "Also, the original concept of IMS was that things were going to be plug and play, and service providers could go get a switching CSCF [Call Session Control Function] from one company, a SCIM [Service Capability Interaction Module] from another, a feature server from yet another, and just plug them all together and everything would work perfectly. What we're actually seeing is that the traditional network equipment providers are going to be the folks that choose and guarantee what works together, and you'll see fewer service providers trying to pick 'one from column A and one from column B' and so forth. Those who own the infrastructure will decide what runs on it. You see that starkly in the Verizon A-IMS [Advances to IMS] proposals. It also blows up the whole Net Neutrality movement. A-IMS has as its subhead, 'not on my network you're not'!"

"We had a good year," says Raffensperger. "The keys things have been getting some new partners, and some analysts have mentioned how Nokia has a new business communications service offering that they're bringing out that includes Sylantro. It's been an exciting year."

U4EA Technologies

(news - alert) Peter Thompson, Chief Scientist at U4EA Technologies (http://www.u4eatech.com), says, "We have a particular interest in quality of service [QoS], by which we mean actually architecting and engineering a network so that it delivers reliable services. One of the things I've noticed in the last year is more interest in QoS in a broader sense. People realize it's something they should be concerned about. This is

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a change from the situation a few years ago, when it was quite difficult to get people interested in it."

"Another interesting angle on this has been the debate over Net Neutrality," says Thompson. "At one point it looked as if the U.S. Congress might legislate against QoS, which would have been interesting. Yes, one of the bills on the table was that it would be illegal to prioritize one type of traffic over another. The debate became furious, and generated more heat than light. Fortunately, Congress didn't pass that bill. People tend to forget that prioritizing one type of traffic over another only makes any difference if the area of the network you're dealing with is congested. The big carrier networks are all full of fiber and DWDM [Dense Wave Division Multiplexing] technology and don't really get congested. So, even if they had the technology in place to prioritize one type of traffic over another, it wouldn't make any difference. Given the bandwidths that exist, it's just irrelevant. The only place it makes any difference is where links are actually congested, which could be on the link to the customer — the access link. But it's not like the customers are going to be using the services of Google and somebody else at the same time on the same link and then observe that Google is better because they paid more money to get a better prioritization. That's absurd. The whole thing is a bit of a tempest in a teacup, from my perspective."

The other Net Neutrality fear is that carriers would block competing VoIP services, which they in fact do on occasion," says Thompson. "But the act of completely blocking something is part of a completely different argument that has nothing to do with whether or not the carrier bestows different priority treatments to the delivery of competing services."

"Incidentally, I'm not implying that simply overprovisioning bandwidth is a panacea," says Thompson. "Historically, people have said that we have more than enough fiber capacity and we'll never run out of bandwidth. Of course, people said that about 64 Kbps frame relay connections, and they said it again when ATM and SONET reached 155 megabits per second. But, to paraphrase the old adage, 'applications expand to steal available bandwidth'. I must admit I have more faith in the ingenuity of people to devise new applications that will exploit the available bandwidth than I have in the ability of companies to engineer entire networks to offer more bandwidth than people can use. So I do believe there will always be a need for QoS. There are a lot of people who would like that need to go away, but it never will."

"What's confusing is that many things are called QoS," says Thompson. "Things like Cisco's MPLS tend to be less about traffic prioritization and more about traffic route control so the packets avoid areas of congestion in the network to begin with. When you're working on a network core and you do have plenty of capacity, and you also have lots of alternate routes available, then it makes sense to use MPLS to control the paths that packet streams can take across the network, so that they don't overload any individual links and cause congestion. In core networks, that's fine. But when you move out toward the customer, that approach tends to fail: the capacity of the links decrease, and the choice of alternate routes becomes restricted. That's exactly where some kind of packet prioritization and congestion management makes sense."

"Different kinds of QoS thus become applicable at different communication layers," says Thompson. "Our particular specialty is optimizing the queuing and scheduling of packets at Layer 3 in the OSI Communications Model. But at Layer 4 there are things you can do with error correction, packet retransmission, jitter buffering, and that kind of thing, which goes a long way toward smoothing out any problems left over from the communications layer below."

"Part of the trouble with MPLS is that you don't tend to get any actual guaranty of what the ultimate performance of the network will be," says Thompson. "You may get some guaranty of bandwidth, but I don't think many service providers are at the moment stepping up to provide any kind of guarantees about what level of packet loss, delay or jitter you'll experience. They'll prioritize some of your traffic to be 'better' but they won't necessarily give you guarantees as to what they can deliver. In 2007, however, I think we'll see some of that starting to happen. There will be more gradations of service — MPLS only has three levels of service — and we'll see more actual guarantees of end-to-end service. Once that starts to happen, it then opens the door for the development of services to real demand, both in terms of stuff like decent video conferencing or services bundles for integrated sectors such as healthcare or whatever."

"Providers will be able to offer not just the obvious real-time stuff, but also this whole business of the 'next wave' of stuff after datacenter consolidation — web services and instances of remote software execution," says Thompson. "That's fine, just as long as you can ensure that the network cooperates. Today, some people may experience some difficulty in getting reliable performance, just as many enterprises find it difficult to achieve reliable performance when they centralize apps across a corporate network. By doing this the enterprise gets more and more dependent on the network being able to deliver a predicable level of performance. As long as it can do that, you can engineer the whole thing to respond well enough for the users, but the more that different bits of applications have to be coordinated across the network in order to deliver the result, the more vulnerable you become to having some packet being lost or some delay being large, resulting in unacceptable performance to the end user. But that will change as we see providers deliver SLAs [Service Level Agreements] with some real 'bite'." IT

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

CEO Spotlight

Ed Preble
CEO
Affinity VoIP Telecom

In the CEO Spotlight section in *Internet Telephony*®, we recognize the outstanding work performed by exemplary companies. Each month we bring you the opinions of the head of companies leading the Internet telephony industry now and helping to shape the future of the industry. This month, we spoke with Ed Preble, Chief Executive Officer of Affinity VoIP Telecom. (news - alert)

RG: What is Affinity VoIP Telecom's mission?

EP: We are becoming an early stage global leader of wholesale Voice-over-IP (VoIP) services and want to position our company as a viable acquisition target. To that end, we provide all the essential services a company needs to start and maintain a successful VoIP business.

For those who deploy their own switch and end user interface and sell VoIP services on a retail basis, we provide domestic, international, and toll-free telephone numbers, PSTN connectivity, E911 call routing, directory assistance and listing services, CNAM, codec conversion, and a host of other *à la carte* services. This allows our clients to offer comprehensive service packages.

We also provide a hosted, private label, self-administered partition on our class 5 switch for organizations that don't own their own equipment. Many companies don't want to make the large financial and time-consuming commitment of engineering a comprehensive, full-featured system. By going this route, a retail seller can literally become a full-featured phone company overnight.

RG: What is your vision for Affinity VoIP Telecom and how is the company positioned in the next-generation telecom market?

EP: I founded the company in 2005 before I had ever heard of Vonage. After evaluating the business case for the VoIP market, I came to realize that the limits for offering the service were not geographic but rather monetary. In other words, I could offer hosted VoIP telecom services on a global scale, but I couldn't afford to market it on a global scale.

The only way to effectively reach the largest number of end users and create the most value for the company was to sell the services on a wholesale basis to resellers who had the marketing resources to sell to end users on a retail basis. It was at that point that I determined the vision of the company, which is to be the dominant leader in wholesale VoIP (define - news - alert) services by being the most recognized, prolific and widely-used source of wholesale VoIP services.

This vision has allowed us to pour all of our financial, engineering and development resources into a customized, one-of-a-kind partitionable system. This allows resellers with strong marketing skills and resources to offer hosted VoIP telecom services to end users and concentrate on marketing efforts while we focus on features, dependability and ease of use.

Our initial goal was to only sell partitions on our switch to private label resellers. We now generate a large portion of our recurring revenue by selling *à la carte* services to other companies who already have their own switch. In light of the changing landscape and industry demand for these services, we've expanded our *à la carte* offerings significantly to meet this growing demand.

Besides the extensive feature set of our switching equipment, one way we are positioned to realize our vision is that we maintain one of the largest in-stock inventories of immediately provisionable telephone numbers in virtually every domestic and foreign rate center available. We have found that obtaining telephone numbers from the CLECs is a time-consuming process, taking anywhere from one to four weeks. When reseller's customers sign up for VoIP phone services, they don't want to wait that long! Maintaining a massive inventory comes at a high cost. But its value comes in knowing our clients and their customers don't have to wait for telephone numbers.

RG: 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?

EP: Government intervention and regulation is a growing concern. Regrettably, I see the FCC steadily reaching its tentacles into the VoIP business and imposing more and more

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Regrettably, I see the FCC steadily reaching its tentacles into the VoIP business and imposing more and more fees and regulations on VoIP providers all the time.

fees and regulations on VoIP providers all the time. VoIP has enjoyed its present growth because, as part of the Internet, it had been left alone to develop. The FCC began by claiming authority over interconnected VoIP providers when it required them to implement E911 services in an overly aggressive time frame. Then it furthered its claim of authority by imposing costly CALEA rules over interconnect VoIP providers. This required that a nascent and poorly financed industry allow the government to listen in on VoIP calls. Its third claim of authority caught most of the industry off guard when it blindsided VoIP providers with a burdensome Universal Service Fund tax that members of the industry had little opportunity or ability to prevent. The Universal Service Fund tax imposes even higher taxes on the VoIP industry than upon Local Incumbent Carriers, Competitive Carriers or even wireless cellular companies.

VoIP has two main attractions, low cost and an increased feature set. Part of that low cost is derived from the fact that traditional carriers have had to charge so many added taxes while VoIP carriers haven't had to pass on that overhead. Hopefully, the VoIP industry can become strong enough to establish a more powerful presence on Capitol Hill so the industry can continue to grow without the burden of government intervention.

RG: What are some of the technology areas where Affinity VoIP Telecom is increasingly focusing, and why are these areas important to the future of your company?

EP: Since the continued success of VoIP depends largely on the user's ability to benefit from additional features and services that are not presently available through traditional PSTN services, we dedicate a high percentage of our resources to bringing new features to market as quickly as possible. Some of the technologies we are introducing now and in the near future include the following: A Dial Around service (no Internet connection required), multi-party conference calling, VoIP Peering, multi-product and multi-service billing capabilities, Video on Demand (VoD), SIP-based instant messaging, web-based calling (no landline phone required), endpoint remote auto provisioning and self-serve real-time telephone number acquisition services.

RG: Describe your view of the future of the IP telephony industry.

EP: I envision VoIP services providers to be as ubiquitous as ISPs. We've brought down the cost of market entry to become a global telephone company. In the coming years, there will be a multitude of private label VoIP telephone companies to purchase from. As the competition picks up, we will see resellers increasing their focus on vertical and local business markets. As the number of competitors increase, there will also be a misleading attraction for companies to compete based on price. Those who attempt to commoditize VoIP and compete on price will eventually disintegrate. In order to maintain price, resellers will need to include more features for the same price. It's just like computing. Each year $1,200 just gets you a more powerful computer. But you don't see many stores selling them for less than $500 and still staying in business. IT

BUYERS'

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GUIDE 2007 PRODUCT & SERVICES LISTINGS

A

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

1SourceVoIP (B, E)
800-777-8197
http://www.1SourceVoIP.com
Products/Services: 59,65,95,113

3Com (A, D)
508-323-5000
http://www.3com.com
Products/Services: 93,95,101,103,41

911 Enable (B, D)
5101 Buchan,
Montreal, QC H4P 1S4
514-745-2143
http://www.911enable.com
info@911enable.com
Products/Services: 73
911 Enable, a division of Connexon Telecom, is a leading provider of VoIP 911 services for enterprises and VSPs in the U.S. and Canada. The company offers FCC and NENA compliant emergency solutions which work with VSPs, enterprises, and IP-PBX hardware manufacturers. 911 Enable's breakthroughs in subscriber provisioning and extension management are on the cutting edge of E911, and its key partnership with TCS ensures a highly adaptable level of service which will continue to evolve with the rapidly changing world of VoIP communications.

Aastra Telecom (A)
905-760-4200
http://www.aastra.com
Products/Services: 60,93,96,36,74

ABP Technology (E)
1850 Crown Drive, #1112
Dallas, TX 75234
972-831-1600
http://www.abptech.com
sales@abptech.com
Products/Services: 93,94,96,97,104
ABP Technology is a specialty distributor that markets VoIP products through a network of Professional Resellers and Channel Partners. ABP is based in Dallas, Texas with a sales and tech support organization that covers the US, Canada, Mexico, and Latin America. ABP Technology features a complete portfolio of VoIP solutions from snom IP Phones and others including products such as AudioCodes media gateways, Converged Access QoS devices, Linksys Adapters, Hitachi-Cable Wireless IP Phones and many more. ABP can be reached at (972) 831-1600 x121 sales@abptech.com

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

Accton Technology (A, B)
+886-3-5770270
http://www.accton.com
Products/Services: 56,78

Accurate Always (A, D)
800-828-9428 x1
http://www.accuratealways.com
Products/Services: 66,72,4,31,40

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

Action Solutions (E)
480-924-4550
http://www.actionsolutions.com
Products/Services: 93

Aculab (A)
197 First Avenue, Suite 130
Needham, FL MA 02494
781-433-6000
http://www.aculab.com
info@aculab.com
Products/Services: 2,6,7,23,94
Aculab offers developers a range of enabling technology communications hardware and software for integration into high performance business solutions.
Products for use within telco or enterprise solutions include digital network access - SIP, H.323 and SS7 (including monitoring capability) and media processing resources, in both IP and PSTN environments.
Support is available to developers for each stage of their product's lifecycle.
Products include; Prosody (certified for use with the Asterisk open source IP PBX Business Edition), Prosody S, a software only host media processing product and Prosody X, a highly configurable IP-based media processing platform, available in PCI, cPCI and PCIe formats.

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

Adomo (C, D)
408-996-7086
http://www.adomo.com
Products/Services: 63,67,68,69,93

ADTRAN, Inc. (A)
256-963-8000
http://www.adtran.com
Products/Services: 86,90,92,96,103

Advanced Communications Solutions (D)
407-788-9845
Products/Services: 50,61,68

Ai-Logix, Inc (D)
732-469-0880
http://www.audiocodes.com/blades
Products/Services: 2,6,7,31

Alcatel (A, C)
800-995-2612
http://www.alcatel.com
Products/Services:
49,50,68,23,95

Alliance Systems (A, D)
3501 E. Plano Parkway,
Plano, TX 75074
Contact: Claire Ortega
972-633-3400
http://www.alliancesystems.com
claire.ortega@alliancesystems.com
Products/Services: 28,93,94,97,110
Alliance Systems, Ltd. designs, builds, ships, and supports communications and computing equipment providing the infrastructure for VoIP, wireless, security, and other communications applications. Through its engineering, manufacturing, and value-added services, Alliance Systems helps customers optimize their businesses by enhancing profitability and reducing time to market. Today, Alliance focuses on delivering open-standards servers to OEMs, ISVs, and service providers throughout the world. Through strategic partnerships with Intel, Microsoft, Cisco, and HP, the company provides a full range of products and services that are specifically designed to meet today's mission-critical communications applications. Alliance Systems' head office is located in Plano, Texas, USA with European Headquarters in Bad Homburg, Germany.

Allot Communications (D)
7664 Golden Triangle Drive,
Eden Prairie, MN 55344
952-944-3100
http://www.allot.com
sales@allot.com
Products/Services: 106,38,40,42,43
Allot Communications (http://www.allot.com) is a leading provider of intelligent IP service optimization solutions. Designed for carriers, service providers and enterprises, Allot solutions apply deep packet inspection (DPI) technology to transform broadband pipes into smart networks. This creates the visibility and control vital to manage applications and services, guarantee quality of service (QoS), contain operating costs and maximize revenue. Allot believes in listening to customers and provides them access to its visionaries, innovators and support engineers.

Allworx (A)
635 Crosskeys Office Park,
Fairport, NY 14450
Contact: Sandra Gault
585-421-3850 x124
http://www.allworx.com
smg@allworx.com
Products/Services: 94,95,100,108
Other: VoIP Key & PBX Phone and Data Network System
Allworx's VoIP solutions for the SMB market feature the lowest installed cost of any system in the industry. Allworx' award-winning offerings combine a sophisticated phone system, with a robust data network and software tools to increase employee productivity and business revenues. Allworx offerings deliver analog AND VoIP capabilities that enable customers to transition to VoIP at their own pace. And the Allworx system provides the easiest installation and administration requirements - which enable companies to focus on their business - and not their phone system.

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

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

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

ARRIS (A, D)
678-473-8327
http://www.arrisi.com
Products/Services: 81,88,93,37,45

Ascendent Systems (D)
888-507-1777
http://www.ascendentsystems.com
Products/Services: 50,63,68,95,104

Aspect Software (D)
888-412-7728
http://www.aspect.com
Products/Services: 70,103,104,33

Associated Call Centers (B, D)
800-610-5262
http://www.inboundacc.com
Products/Services: 54,56,68,69,72

KEY
- A: Equipment Vendor
- B: Service Provider/ Carrier
- C: Software Developer
- D: Solutions Provider
- E: Reseller/Distributor

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AudioCodes (A)
2099 Gateway Place, Suite 500
San Jose, CA 95131
408-441-1175
http://www.audiocodes.com
info@audiocodes.com
Products/Services: 2,7,94,97,44
AudioCodes (NASDAQ: AUDC) provides innovative, reliable and cost-effective Voice over Packet technology and Voice Network products to OEMs, network equipment providers and system integrators. AudioCodes offers its customers and partners a diverse range of flexible, comprehensive media gateway and media processing technologies, based on VoIPerfectT - AudioCodes' underlying, best-of-breed, core media gateway architecture. The company is a market leader in voice compression technology and is a key originator of the ITU G.723.1 standard for the emerging Voice over IP market. AudioCodes' international headquarters and R&D facilities are located in Israel, with U.S. headquarters in San Jose, California.

Avaya Inc. (A, C)
800-784-6104
http://www.avaya.com
Products/Services: 68,72,96,95,108

Axcis.Net Software (C)
800-585-1696
http://www.axcis.net
Products/Services: 119
Other: Field Service Management Software

B

BandTel for Flawless VoIP (B)
949-640-9700
http://www.bandtel.com
Products/Services: 113,115,116,36

Bandwidth.com (B)
919-297-1100
http://www.bandwidth.com/
Products/Services: 113,114

BCE Elix (B, D)
501-768-1000
http://www.bceelix.com
Products/Services: 125,31,37,47
Other: Contact center solutions

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

SEE THE INDEX LOCATED ON Pages 94 & 95

BorderWare Technologies Inc. (A)
905-804-1855 x245
http://www.borderware.com
Products/Services: 90,41
Other: VoIP Firewall

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

C

CallingPlaces, Ltd (B)
44-2088106609
http://www.callingplaces.com
Products/Services: 55,59,63,64,68

Canecu Trading Inc (D)
416-238-2329
Products/Services: 35,38,45,46

Cantata Technology (A)
410 First Ave,
Needham, MA 02494
781-449-4100
http://www.cantata.com
info@cantata.com
Products/Services: 2,106,97,101,105
Cantata Technology, established in 2006 through the combination of Brooktrout Technology and Excel Switching Corporation, provides enabling communications hardware and software that empowers the creation and delivery of anytime, anywhere IP-based communications applications. Cantata's proven, open standards-based technology has given rise to one of the largest, broadest, and deepest enabling technology product lines in the communications industry. Used extensively by enterprises and service providers alike, Cantata's products enable innovative services and solutions with applications ranging from voice and video, messaging, IP call centers, fax document management and compliance, prepaid, and speech-enabled services.

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

Carrius Technologies, Inc. (C)
214-572-7800
http://www.carriustech.com
Products/Services: 106,101
Other: Network Layer Service Delivery Platform

Castle CRM (C, E)
866-330-6470
http://www.acastle.com
Products/Services: 128,129,133,134,118

ALPHABETICAL LISTINGS

Catalog Retail Marketing Int'l, Inc. (CRMI) (B)
802-334-1000 x203
http://www.crmi.cc
Products/Services: 56,72
Other: CRMI provides inbound call center services (Voice/web/e-mail)

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

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.ciceronetworks.com
Products/Services: 45,46,79
Other: wVOIP Solutions

ClearOne Communications (A)
800-707-6994
http://www.clearone.com
Products/Services: 50,52,65,67,17

Clearpath Communications, LLC (B)
248-724-4444
http://www.clearpath1.com
Products/Services: 59,63,128,113

Codima Technologies (C, D)
610-579-9435
http://www.codimatech.com
Products/Services: 24,27,28,38

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

Common Voices, Inc (C)
617-286-1600
http://www.commonvoices.com
Products/Services: 50,58,63,68,42

CommPartners (D)
702-367-8647 x1017
http://www.commpartners.us
Products/Services: 111,113,39,47
Other: IP-Based Wholesale Solutions

CommuniGate SYSTEMS
A DIVISION OF STALKER SOFTWARE

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
CommuniGate Systems creates and distributes CommuniGate Pro - the most scalable and modern Internet Communications application server on the market today. The comprehensive solutions will enable service providers to enhance revenues and allow organizations to consolidate voice and data Internet Communications. From email and calendaring, to instant messaging, VoIP, Conferencing Server and IP PBX, CommuniGate Pro supports it all from one proven, reliable platform.

Comtico (A, E)
+45 7027 9299
http://www.comtico.com
Products/Services: 88,92,93,94,96

Comwave Telecom Inc. (B, D)
416-663-9700 x303
http://www.comwave.net
Products/Services: 62,123,116,29,45

Contek Networks, Inc. (A)
510-342-5700
http://www.conteknet.com
Products/Services: 94,96

Converged Access Inc. (A)
978-742-1400 x404
http://www.convergedaccess.com
Products/Services: 92,107,40,41,46

Converged Access Inc. (A)
978-742-1400
http://www.convergedaccess.com
Products/Services: 90,92,40,41,46

Convergin (A)
+972-9-951 7771
http://www.convergin.com
Products/Services: 105,108,79
Other: wireless convergence server, SCIM

CosmoCom, Inc. (C)
631-940-4200
http://www.cosmocom.com
Products/Services: 62,70,72,33
Other: Unified Customer Communications IP Contact Center

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

D

Datasoftnet (E)
314-258-2902
http://www.datasoftnet.com
Products/Services: 28

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

Digerati Networks (B, E)
210-614-7240
http://www.digerati-networks.com
Products/Services: 113

Digium, Inc. (A, D)
256-428-6000
http://www.digium.com
Products/Services: 2
Other: Asterisk, the Open Source PBX

DIRIGOSOFT

Dirigosoft Corporation (A, D)
443 Congress St, Ste 400
Portland, ME 04101-3546
Contact: Craig Shambaugh
877-870-1234
http://www.dirigosoft.com
sales@dirigosoft.com
Products/Services: 67,69,70,95,36
Dirigosoft develops and provides world-class business communications solutions for small- and medium-sized businesses. Our products and services direct the communication flow of these companies to help businesses "Make Contact. Better." By providing affordable mission critical communications solutions, Dirigosoft is changing the way businesses handle customer contact. Our flagship product, Dirigo iQueue, offers an integrated PBX/ACD system that's feature-rich, flexible and more affordable than competing products. Now every business can benefit from a commercial-grade communications system that's easy to configure and easy to use - without having to make a major investment.

SEE THE INDEX LOCATED ON Pages 94 & 95

Diversified Technology (A, D)
800-443-2667
http://www.dtims.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

E

Echo by BenchmarkPortal (B)
805-614-0123 x62
http://www.echoinformation.com
Other: After Call Customer Satisfaction Solution

EFONICA
Hear the Difference
Powered by Fusion

Efonica (B)
420 Lexington Avenue, Suite 1718
New York, NY 10170
Contact: Karen Black
212-201-2400
http://efonica.com
info@efonica.com
Products/Services: 115
Efonica offers next-generation VoIP calling solutions for consumers and corporations around the world. Built on patent-pending technology, Efonica products and services are designed to work with dial-up, wireless, and broadband Internet connections, and from many calling devices, not just PCs. You can even use your regular telephone! Save up to 80% on international calls, even when calling from your mobile phone! With Efonica, you'll enjoy advanced calling features, multiple access methods, and sophisticated voicemail services. Join Efonica and add the Internet Area Code to your phone number today. For more information, visit http://www.efonica.com.

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

ELMA
Your Solution Partner

Elma Electronic (A)
44350 S. Grimmer Blvd.,
Fremont, CA 94538
Contact: Justin Moll
510-490-7388 x516
http://www.elma.com
sales@elma.com
Products/Services: 11,134
Elma Electronic is a global designer and manufacturer of products for housing electronic systems. The company provides everything from components such as modular enclosures, cabinets and backplanes up to complete standard or custom system platforms. Elma also manufactures precision rotary switches. The company offers a fast, flexible response to customer needs and extensive practical knowledge in tailoring solutions to specific applications. Founded in 1960, the Elma Group has production facilities and sales offices worldwide serving the mil/aero, industrial, research, telecom, medical, and commercial markets. With vast expertise in Eurocard-based platforms, standard architectures include AdvancedTCA, CompactPCI, MicroTCA, VME, VME64x, VPX, VXI, VXS, and more.

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

Encore Networks (A)
703-318-4366
http://www.encorenetworks.com
Products/Services: 71,92,103,105,41

ENGATE Technology Corporation (D)
408-494-8310
http://www.engate.com
Products/Services: 41
Other: connection management, reputation based security, protocol level security

Enteractive Distribution Co. (E)
860-236-8600
http://www.enteractive.com
Products/Services: 130,133

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)
972-692-1166 x38
http://www.epygi.com
Products/Services: 50,82,94,95,103

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

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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

FaxBack, Inc. (C, D)
503-597-5355
http://www.faxback.com
Products/Services: 53,54,58,89,119

Forum Communications International (A, D)
972-680-0700 x1581
http://www.forum-com.com
Products/Services: 49,50,52,67
Other: Emergency Response/Collaboration

Freeway Communications (B, E)
213-225-2200 x101
http://freeway.com
Products/Services: 59,104,134,115,29

G

Gallery IP Telephony (A, D)
972 9 7486787
http://www.g-ipt.com

General Telecom (D)
646-328-5800
http://www.gentel.net
Products/Services: 62,123,38
Other: Full-Service TDM And IP Network Management D

Givex Corporation (B)
877-478-7733
http://www.givex.com
Products/Services: 134,47
Other: Gift Cards, Loyalty Cards, Stored Value, Coupons, Payment Systems

GL Communications, Inc. (D)
207A Perry Parkway, Suite One
Gaithersburg, MD 20877
Contact: Shelley Sharma
301-670-4784 x114
http://www.gl.com
info@gl.com
Products/Services: 24,25,26,27,28
GL is a global provider of test & measurement tools for VoIP, TDM, & Wireless networks. Unlike conventional testing tools, our test platforms provide visualization, capture, storage, portability, remote-access, and scripting. TDM products include T1, E1, T3, OC-3, STM-1, & analog 4-wire/ 2-wire interface solutions. VoIP products generate / analyze thousands of calls simultaneously with voice, digits, tones, noise, & fax traffic types using G.711, G.729, AMR, EVRC, & GSM codecs. Wireless products perform protocol analysis & voice quality assessment on GSM, CDMA, UMTS, & CDMA 2000 networks. Echo Canceller & Network Surveillance testing solutions provide the broadest range of simulation & analysis for TDM, VoIP, ATM, & Wireless networks, including compliance testing per G.168 & G.160. GL is headquartered in the US with worldwide branch offices.

GlobalTouch Telecom (B)
11845 W. Olympic Blvd.,
Suite 600
Los Angeles, CA 90064
800-254-3107
http://www.globaltouchtelecom.com
sales@globaltouchtelecom.com
GlobalTouch Telecom offers proprietary, vertically-integrated VoIP platforms, of which every aspect of the technology is built from the ground up, creating a one-stop single vendor VoIP solution. The product comprises an all-inclusive, private-label offering for Carriers, MSOs, Resellers, PTTs, ILECs, ISPs, CLECs and marketing companies. The platform is completely customizable, and can be rolled out in 60 days or less. The ASP product enables low CAPEX/OPEX offerings for enterprise and residential deployments. Since GlobalTouch develops, owns and operates all aspects of its technology, it has the flexibility to create, leverage and market its own innovations and applications without having to resell 3rd-party technology.

GM Voices, Inc. (B, D)
770-752-4500
http://www.gmvoices.com
Products/Services: 69,123,125,113
Other: Voice Branding, Speech Recognition, International Telephony, Corporate Storytelling

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

GoHigh Data Networks Technology Co., Ltd. (A)
No. 40 Xueyuan Road Haidian District,
Beijing, 00 100083
Contact: Lisa Yao
+8610-62302956
http://www.datangnetwork.com
yaohaix@hotmail.com
Products/Services: 84,96,97,104
Other: ATA

GoHigh Company (http://www.datangnetwork.com), as a public company and one of top telecom products manufacturers from China, is dedicating to provide best products and solutions in the VoIP field. GoHigh focuses on VoIP carrier operation system as well as enterprise products, providing Softswitch, Billing system, IP-PBX, Media Gateway, Analog FXS/FXO gateway, ATA and IP Phones. All these VoIP products and solutions are widely used in markets globally with CE, FCC, ISO certificates. With complete product line, outstanding quality, quick response on customized changes, real time support, and competitive price, GoHigh will be your first choice for VoIP products and solutions.

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

gr8fone.net (B, D)
919898008655
http://gr8fone.net
Products/Services: 118,112,113,115,46

Grandstream Networks, Inc. (A, C)
1297 Beacon Street, 2d Floor
Brookline, MA 02446
Contact: Marianne Rocco
617-566-9300
http://www.grandstream.com
mrocco@grandstream.com
Products/Services: 23,93,94,96,97
Grandstream Networks, Inc. is an award-winning designer and manufacturer of next generation IP voice & video products for broadband networks. Grandstream's products deliver superb sound and picture quality, rich telephony features, full compliance with industry standards, and broad interoperability with most service providers and 3rd party SIP based VoIP products. Grandstream is consistently recognized in the VoIP industry for their innovation, affordability and superior value in their products. Grandstream Networks is a private company headquartered in Brookline, MA with offices in Los Angeles, Dallas and China. For more information, please visit http://www.grandstream.com.

H

HEAD acoustics GmbH (C, D)
+49-2407-5770
http://www.head-acoustics.de
Products/Services: 24,25,27,28,128

Hermon Labs (A)
972-4-628-8001
http://www.hermonlabs.com
Products/Services: 25,27,28,129

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

High Tech High Touch Solutions, Inc. (B)
425-398-9292
http://www.HTHTS.com
Products/Services: 128,129,134
Other: Help Desk & Call Center Conferences and Services (HD Prof. & Gov. Customer Sprt.

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

I

I.S. Associates, Inc. (C, D)
1260 Rankin Suite G,
Troy, MI 48083
Contact: Matt Marshall
800-583-3440 x142
http://www.isassoc.com
mmarshall@isassoc.com
Products/Services: 51,119,29,38,39
Founded in 1987 and headquartered in the Detroit Michigan suburb of Troy, I.S. Associates, Inc. (ISA) is a software and services provider specializing in communications billing and customer care, call accounting, and telemanagement solutions. ISA has achieved international recognition for its flagship product, TeleCount, which is used by hundreds of customers worldwide.

i3 Networks (B)
9766 Whithorn Dr., Suite A
Houston, TX 77095
281-500-8510
http://www.i3net.us
sales@i3net.us
i3 Networks is a leading provider of wholesale network elements and managed switch services. Through our next generation switching network, i3 is able to offer innovative solutions to service providers looking for individual network components or an end-to-end solution all with old-fashioned customer service. We also provide E911 and CALEA compliance solutions allowing providers to simplify their networks and start making money faster. Acting as a bridge between the IP and TDM worlds, our network is protocol agnostic. We are capable of supporting T1, ISDN PRI, SIP, MGCP, and NCS (Packet Cable).

iKnowWare (C)
512-215-4305
http://www.iKnowWare.com
Products/Services: 49,50,68,72,,,

ALPHABETICAL LISTINGS

Incognito Software (C, D)
604-688-4332 x860
http://www.incognito.com
Products/Services: 93,134,35,38,39

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

Intelenet Global Services (B, D)
972-712-7426
http://www.intelenetglobal.com

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

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

Intertex Data (A)
508-385-6335
http://intertexdata.com
Products/Services: 8,90,94,95,103

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

iotum (C)
613-482-9099
iotum.com
Products/Services: 63,69,121,123

IVR Technologies, Inc. (C)
213-634-1522
http://www.ivr.com
Products/Services: 51,55,63,64,29

IVR USA (D)
971-249-1322
http://www.ivrusa.com
Products/Services: 129,133,134

Ixia (A)
818-871-1800
http://www.ixiacom.com
Products/Services: 25,27,28,38,40

J

JDSU (A)
866-228-3762
http://www.jdsu.com
Products/Services: 25,27,28,38,40

K

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

L

Level 3 Communications (B)
877-2LE-VEL3
http://www.Level3.com
Products/Services: 111,113,116

Linksys, a Division of Cisco Systems (A)
408-853-7682
http://www.linksys.com
Products/Services: 93,94,96,95,103

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

M

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

MaraStar Communications (B, C)
610-902-0080 x125
http://www.marastar.com
Products/Services: 52

MERA Systems, Inc. (A, C)
866-644-3051 x5973
http://www.mera-systems.com
Products/Services: 84,95,104
Other: Session Border Controller

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

MichTel Communications, LLC (B, D)
248-771-5000
http://www.michtel.com
Products/Services:
111,113,114,115,116

Microtronix Systems Ltd (A)
519-649-4900
microtronix.ca
Products/Services: 27,28,96
Other: TIA810-A/B, TIA920

Mindspeed Technologies, Inc. (D)
949-579-3650
http://www.mindspeed.com
Products/Services: 5,45,46,79
Other: Comcerto carrier-class VoIP processing solutions

KEY

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

Minerva Networks
408-567-9400
http://www.minervanetworks.com
Other: IPTV Services

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

N

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

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Netcordia (A)
415-389-1409
http://www.netcordia.com
Products/Services: 38

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

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

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

Newport Networks Limited (A)
+44 (0) 1291 635830
http://www.newport-networks.com
Products/Services: 59,62,23,131
Other: Session Border Controller

NexTone Communications (C, D)
240-912-1310
http://www.nextone.com
Products/Services: 104,38,40
Other: Session Border Control

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NMS Communications (A, D)
800-533-6120
http://www.nmscommunications.com
Products/Services: 1,2,7,20,44

Noble Systems Corporation (C)
888-866-2538 x300
http://www.noblesys.com
Products/Services: 70,72,37

Nortel Networks (A)
800-4NO-RTEL
http://www.nortelnetworks.com
Products/Services: 68,71,70,72,23

Nuvio (B)
816-444-4422
http://www.nuvio.com
Products/Services: 59,63,70,123,113

O

On2 Technologies, Inc. (C)
518-724-3872
http://on2.com
Products/Services: 16
Other: Video for VoIP

OPC Marketing, Inc. (A, C)
972-267-3279 x202
http://www.opc-marketing.com
Products/Services: 20,87,89,121,119

Orative (C)
408-625-3100
http://www.orative.com
Products/Services: 68,30,32,79

P

PacketStorm Communications (A)
732-254-2434 x206
http://www.packetstorm.com
Products/Services: 24,25,27,28

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: Stephen Baumer
800-805-0558
http://www.pandoranetworks.com
info@pandoranetworks.com
Products/Services: 49,59,68,70,115
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

pbxnsip inc. (A)
978-364-0072 x111
http://www.pbxnsip.com
Products/Services: 93,95

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: 64,106,113,74

Polycom, Inc. (A)
800-POL-YCOM
http://www.polycom.com
Products/Services: 10,83,91,96,98

Pronexus Inc. (D)
613-271-8989
http://www.pronexus.com
Products/Services: 119,123,125,31
Other: IVR development tools

Psytechnics (C, D)
978-392-1244
http://www.psytechnics.com
Products/Services: 26,27,28,40

Q

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

R

RADCOM, Ltd. (A, D)
6 Forest Avenue,
Paramus, NJ 07652
Contact: Elizabeth Giordano
201-518-0033 x320
http://www.RADCOM.com
info@radcomusa.com
Products/Services: 24,25,27,28,43
RADCOM, (NASDAQ/TASE: RDCM), is an award-winning innovator specializing in voice/data/video over IP, as well as next-generation cellular network technologies. Its market-leading, high-performance, analysis, simulation, monitoring and troubleshooting solutions are used by ILECs, cable and cellular operators for early stage fault detection, pre-emptive maintenance, and network and service optimization. RADCOM's proven strength is its flexibility and responsiveness in an environment of rapidly changing technology and customer requirements, evolving industry standards and frequent new product introductions. The company has a strong and dedicated organizational network that includes over 70 distributors in 50 countries worldwide and 9 manufacturer's representatives across North America.

RadiSys Corporation (A, D)
5445 NE Dawson Creek Drive,
Hillsboro, OR 97124
800-950-0044
http://www.radisys.com
info@radisys.com
RadiSys (Nasdaq: RSYS) is a leading provider of advanced solutions for the communications networking and commercial systems markets. Through intimate customer collaboration and combining innovative technologies and industry leading architecture, RadiSys helps OEMs, systems integrators and solution providers bring better products to market faster and more economically. RadiSys products include AdvancedTCA solutions, media servers, embedded boards and turn-key systems which are used in today's complex computing, processing and network intensive applications.

RAMS Group (B, D)
416-518-4344
http://www.rams-group.com
Products/Services: 29,39

Red Hawk/CDT (A)
800-989-4295 x235
http://www.power-sense.com
Products/Services: 129
Other: Power over Ethernet Hubs

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

S

Samsung BCS (D)
1301 East Lookout Drive,
Richardson, TX 75082
Contact: Kim Waldrop
972-761-7000
http://www.samsung.com/bcs
kwaldrop@sta.samsung.com
Products/Services: 95,100,31
Samsung Business Communication Systems (BCS), a Dallas-based division of Samsung Telecommunications America, is the distribution arm for the company's line of business communications solutions. Targeting small- to medium-sized businesses, Samsung BCS offers telephony-based customer premise equipment (CPE) with dynamic architecture that can accommodate tremendous growth at low incremental costs to meet a variety of communications needs. Samsung's business communications systems combine traditional voice and data capabilities with wireline and wireless technologies providing fully integrated, converged communications platforms and applications. In addition to CPE, Samsung BCS also offers a comprehensive line of voice processing equipment, CTI applications and wireless solutions.

SBE (A)
925-355-2000
http://www.sbei.com
Products/Services: 6,9,97

SES AMERICOM (B, D)
609-987-4555
Products/Services: 60,71,78,79
Other: Satellite Communications

Sevis Systems (A, C)
770-536-2425
http://www.sevis.com
Products/Services: 105,44,76,77
Other: Fraud Solution

Shenzhen Koncept Technology Development Co.,Ltd (D)
(86)755 82197307 x823
http://www.konceptusa.com
Products/Services: 23,29,39,45
Other: VOIP

ALPHABETICAL LISTINGS

ShoreTel (A, C)
408-331-3369
http://www.shoretel.com
Products/Services: 22,96,95,100,36

Siemens Communications (B)
800-765-6123
http://www.communications.usa.siemens.com/home.html
Products/Services: 61,66,120,29,37

SMART NETWORK SOLUTIONS (D, E)
305-808-7361
http://www.smartisvoip.com
Products/Services: 104,130,134,29
Other: Integration of projects in IP communications

SMC Networks (A)
949-679-8000
http://www.smc.com
Products/Services: 8,9,103,110

snom VoIP phones

snom technology AG (A)
Gradestr. 46,
Berlin, 00 12347
Contact: Dylan D'souza
++49-(0)30-39833 x113
http://www.snom.com
infoUSA@snom.com
Products/Services: 23,28,96,41
Other: Manufacturer SIP VoIP Phones
snom technology AG develops and manufactures Voice-over-IP (VoIP) telephones and related equipment based on the IETF open standard, SIP (Session Initiation Protocol). Recognized for its high quality, customizable and cost-effective business solutions, snom is also differentiated by the company's ten-year history in the VoIP industry, and its dedication to high security standards. All of snom's software exists in the firmware on the phones - making it easier for users to download updates and new features. snom customers benefit from the interoperability and flexibility that the snom telephones offer, including plug and play integration and universal compatibility with any SIP-based telephony platform.

Softel Communications Inc (C, D)
877-525-1987
http://www.softel.com
Products/Services: 69,72,20,83,129

SOLEGY™

Solegy LLC (C, D)
121 Varick St., Suite 201,
New York, NY 10013
Contact: Jaime Martelino
212-801-2506
http://www.solegy.com
info@solegy.com
Products/Services: 20,106,104,123,29
Solegy offers hosted solutions for VoIP and IMS. Service PDQ, Solegy's managed service deployment platform enables service providers, network operators and content developers to launch broadband communications services with minimal capital expenditure and integration overhead, resulting in reduced risk, faster time-to-market and a higher return on investment. By integrating solutions for VoIP, content distribution and intelligent session management with standards-based telecommunications middleware, ServicePDQ makes the overall processes of launching new services and applications easier. The result is unprecedented openness and flexibility, lower total cost of ownership, faster time-to-market, and reduced risk from managing a rapidly-evolving set of technologies. Solegy's pre-built applications include SOHO Broadband, VoiceVPN, Wholesale Peering, Calling Cards and Callback and can easily integrate with third party applications. All Solegy solutions can be white-labeled and include real-time billing, operator-grade session management, and a comprehensive back-office environment.

SOYO Group, Inc. (A, D)
909-292-2500 x2503
http://www.soyogroup.com
Products/Services:
64,94,23,323,,103,36

SPANLINK™

Spanlink Communications (C, D)
605 Highway 169 North,
Minneapolis, MN 55441-6422
Contact: Kristen Jacobsen
763-971-2000
http://www.spanlink.com
mktg@spanlink.com
Products/Services: 70,95,129,134,31
Spanlink Communications is a leading provider of customer interaction solutions that leverage VoIP technology. With nearly 20 years experience, Spanlink develops and markets customer interaction, workforce optimization, and system management and reporting products, all of which exploit the benefits of VoIP network infrastructures. Spanlink applies expert planning, migration and support services to tailor each customer's solution and support plan to its business needs for transformational business improvements in productivity, efficiency and customer satisfaction.

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SpectraLink (A, D)
303-583-5342
http://www.spectralink.com
Products/Services: 96,110,74,79

Sphere Communications Inc. (C, D)
847-793-9600 x300
http://www.spherecom.com
Products/Services: 23,100,104,36
Other: IP PBX & Unified Communications

Stampede Technologies (C, D)
937-291-5035
http://www.stampede.com
Products/Services: 102

STBS (B, D)
301-585-1200 x117
http://www.stbs.com
Products/Services: 51,64,68,29

Stratus Technologies (A, D)
978-461-7000
http://stratustelecom.com
Products/Services: 3,84,106,95,105

SyChip (C, D)
972-202-8847
http://www.sychip.com
Products/Services: 18,20,23,79,80

SysMaster Corporation (A, D)
877-900-3993
http://www.sysmaster.com
Products/Services: 66,94,95,29
Other: VoIP, IPTV, WiFi Solutions

T

Tadiran America (A, C)
866-595-4900
http://www.tadiranamerica.com
Products/Services: 70,94,95,100,36

Target Distributing (A, E)
800-873-5528 x1120
http://www.targetd.com
Products/Services: 13,10,93,94,130

Tekelec (A)
888-628-5521
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

Telacquire Marketing Group Inc. (B)
604-677-7780
http://www.telacquire.com
Products/Services: 128,133

Telanetix (A)
858-362-2250
http://www.telanetix.com
Products/Services: 50,61,10,40
Other: Telepresence

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: 81,88,92,107
Other: VoIP Gateway,VoIP IAD, VDSL, IP/Ethernet Switches / Demarc, TDM, Fiber Transport

TeleBright (C, D)
888-519-1472
http://www.telebright.com
Products/Services: 20,128,38,75

TELECORP PRODUCTS., INC (C, D)
248-960-6642
http://www.telecorpproducts.com
Products/Services: 129

Teleformix

Teleformix (B, D)
2100 Golf Road, Suite 460
Rolling Meadows, IL 60008
847-472-5300
http://www.teleformix.com
info@teleformix.com
Products/Services: 118
ECHO is a browser-based digital recording, quality monitoring and CRM platform. ECHO includes an open SOA architecture and delivers unique business enablement capabilities. ECHO delivers an integrated open infrastructure integrating with Avaya and Cisco voice solutions seamlessly. ECHOs unlimited scalability will grow with your business without the fear of system constraints, therefore optimizing your investment.
ECHO Quality management incorporates synchronized voice and screen recordings, providing advanced business intelligence across the entire call center environment. ECHO screen capture module compliments a robust suite of quality assurance and analytics modules. The synchronized voice and screen file footprint requires only 1-2Mb in size for the average four-minute conversation. With over the shoulder screen clarity, supervisors can streamline agent performance evaluations while providing customers Best-in-Class service.

Telesis A.S. (A)
+90 312 3840394
http://www.stillink.com
Products/Services: 94,97,105,44

TeleVoce Inc (A, C)
408-627-4044
http://www.televoce.com
Products/Services: 57,65,94,96,129

Telkonet, Inc. (A, D)
240-912-1800
http://www.telkonet.com
Products/Services: 118

TelStrat (C)
972-543-3500
http://www.TelStrat.com
Products/Services: 67,70,102,36
Other: VoIP Call Recording/Logging

Teltronics, Inc. (A, D)
941-753-5000 x7315
http://www.teltronics.com
Products/Services: 50,68,72,96,95

The Telecom Directory (B, D)
404-797-6633
http://www.TheTelecomDirectory.com
Products/Services:
128,111,113,114,115

TiVi (C, D)
+371 7881005
http://www.tivi.com
Products/Services: 66,23,77,79
Other: VoIP on smartphones (Symbian and Windows Mobile) over 3G, EV-DO, GPRS and WiFi

TMONE (B, E)
877-868-2586
http://www.TMone.com
Other: Customer Acquisition, Lead Generation, Lists Services, & Project Managment

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TMPG (C)
310-327-9700
http://www.tmpg.com
Products/Services: 119

TOSHIBA

Toshiba America Information Systems, Telecom Systems Div. (A)
9740 Irvine Blvd.,
Irvine, CA 92618-1697
Contact: Jon Nelson
949-583-3700
http://www.telecom.toshiba.com
TSDMarketing@tais.toshiba.com
Products/Services: 68,10,96,95
Other: Wireless IP Phones, FeatureFlex, digital phones, softphones, Client Software
Toshiba America Information Systems Inc., Telecommunication Systems Division offers business communication solutions for SMB enterprises and regional locations. Toshiba's award-winning products deliver Voice over IP, networking, mobility, and the ability to customize applications. Toshiba's flagship solution is the Strata CIXT, an IP communication system that supports up to 672 ports, offers FeatureFlex customization capabilities and can be TDM-enabled. Toshiba also offers Strata CTX28 small office system, voice processing, video, and IP, soft IP, and digital telephones. Its business solutions also include Toshiba notebooks and tablet PCs, security cameras and more, helping enterprises maximize their business efficiency in communications and mobility.

TOUBATEL (A, B)
+33172100204
http://www.toubatel.com
Products/Services: 50,56,59,125

TOUCHSTONE TECHNOLOGIES
Essential VoIP Verification Solutions

Touchstone Technologies Inc. (C, D)
228 N York Road, Suite D
Hatboro, PA 19040
Contact: Neil Urban
215-672-6550
http://www.touchstone-inc.com
neil.urban@touchstone-inc.com
Products/Services: 24,25,27,28
Touchstone Technologies has been providing essential communications testing solutions to industry leaders and innovators since 1989. Representing the second and third generation of testing solutions for the converging telephone, voice, video and IP markets, our current offering of test tool products are unsurpassed in their combination of power, portability, and affordability. Specializing in delivering exceptional value in state-of-the-art voice and video test and measurement products, Touchstone offers scalable call generation and monitoring tools designed for complete lifecycle testing of networks and network devices. Our products help leading equipment manufacturers, carriers, service providers, and large enterprise users build and deploy reliable, standards compliant, and interoperable communications systems.

TransNexus (C)
404-526-6060
http://www.transnexus.com
Products/Services: 62,104,127,39
Other: GKTMP Route Server

Traxi Technologies, LLC (C, D)
212-812-9450 x114
http://www.traxitech.com
Products/Services: 129,119,29,31
Other: Call Recording/CRM Integration

KEY

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

Trenton Technology, Inc. (A)
770-287-3100
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

TriVium Systems, Inc (C)
877-439-9338 x320
http://www.triviumsys.com
Products/Services: 29,31,40
Other: Call Accounting, Call Recording & Traffic Analysis

U

U4EA Technologies (A, C)
+441173736758
http://www.u4eatech.com
Products/Services: 88,92,97,103,40

Ubiquity Software Corporation (C, D)
650-413-7103
http://www.ubiquitysoftware.com
Products/Services: 50,20,21,23,42

UCN™ get inContact™

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: 70,72,121,31,33
Improve the quality of your customer contact experience without adding complexity to your IT infrastructure. With inContact from UCN, manage multi-site or at-home workers under a unified set of contact handling and management features work-force management, self-service IVR, intelligent routing (ACD), integration with your database/ CRM, automated customer satisfaction surveys. Already invested in a phone system supports both traditional TDM or VOIP systems. 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.

Unex Technology Corp. (A)
+886-3-5256262 x201
http://www.unex.com.tw
Products/Services:
12,23,323,,36,79,80

V

VegaStream (A)
858-824-6388
http://www.vegastream.com
Products/Services: 94

VeriSign (B)
650-961-7500
http://www.verisign.com
Products/Services: 116,29,44,76,77

Vertical Communications (A)
617-354-0600
http://www.vertical.com
Products/Services:
82,87,96,95,100

Viziqor Solutions (C, D)
508-248-9896
http://www.viziqor.com
Products/Services: 129,131,29,39
Other: Revenue Assurance

VoiceStamps.com (B, D)
469-272-4688 x1
http://www.voicestamps.com
Products/Services: 69,123,117,29
Other: Call Recording, Verbal Contracts, TPV, Pay by Phone

VoIP Inc. (B)
407-389-3232
http://www.voipincorporated.com
Products/Services:
56,23,111,113,116

VoIPshield Systems (C)
613-224-4443 x317
http://www.voipshield.com
Products/Services: 41

Vonexus Inc. (D)
888-817-5904
http://www.vonexus.com
Products/Services: 68,23,95,47,79

VOX

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
Based in Celebration, FL, VoX Communications is a proven provider of wholesale and retail Voice over Internet Protocol (VoIP) services. Using its own nationwide VoIP network, VoX offers scalable and reliable broadband voice, origination and termination services to cable, wireless and wireline operators, as well as enhanced broadband telephone service to the small business and residential marketplaces. VoX provides a feature-rich, low-cost and high-quality alternative to traditional wireline phone service. Find out how VoX can help you drive new revenue, attract more customers and improve customer retention. Visit http://www.voxcorp.net for more information.

Voxbone (B)
+32 22 18 55 39
http://www.voxbone.com
Products/Services: 131,111,113,116
Other: Origination Services

W

WebPhone (B, C)
866-320-3077
http://www.webphone.com
Products/Services: 59,64,20,23,117

WildPackets (C)
925-937-3200
http://www.wildpackets.com
Products/Services: 27,28,38,80
Other: Distributed Network Analysis Solutions

WiredRed Software (C)
858-715-0970
http://www.wiredred.com
Products/Services: 49,50,52,61,67

Witness Systems (C, D)
770-754-8651
http://www.witness.com
Products/Services: 72,40,47

X

Xelor Software (C)
603-327-0400
http://www.xelorsoftware.com
Products/Services: 40
Other: VoIP QoS Software

Z

zCONNEX GROUP (B, D)
800-715-9990
http://www.zconnex.com
Products/Services: 56,70,121,33,40

Zoom Technologies, Inc. (A, B)
617-535-9383
http://www.zoom.com
Products/Services: 7,8,93,96
Other: Analog Telephone Adapters

HARDWARE

1. Boards Video Conferencing

NMS Communications
800-533-6120
http://www.nmscommunications.com

2. Boards Voice/Fax

Aculab
781-433-6000
http://www.aculab.com
(See our enhanced listing in the alphabetical section.)

Ai-Logix, Inc
732-469-0880
http://www.audiocodes.com/blades

AltiGen Communications, Inc.
510-252-9712
http://www.altigen.com

AudioCodes
408-441-1175
http://www.audiocodes.com
(See our enhanced listing in the alphabetical section.)

Cantata Technology
781-449-4100
http://www.cantata.com
(See our enhanced listing in the alphabetical section.)

Digium, Inc.
256-428-6000
http://www.digium.com

NMS Communications
800-533-6120
http://www.nmscommunications.com

PIKA Technologies Inc.
613-591-1555 x388
http://www.pikatechnologies.com

3. Computers/Fault Tolerant/NEBS

Crystal Group Inc.
319-378-1636
http://www.crystalpc.com

Diversified Technology
800-443-2667
http://www.dtims.com

Motorola Embedded Communications Computing Group
602-437-3623
http://www.motorola.com/computing

Stratus Technologies
978-461-7000
http://stratustelecom.com

Trenton Technology, Inc.
770-287-3100
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.dtims.com

Trenton Technology, Inc.
770-287-3100
http://www.TrentonTechnology.com

5. DSP Chips

Centillium Communications, Inc.
510-771-3700
http://www.centillium.com

Mindspeed Technologies, Inc.
949-579-3650
http://www.mindspeed.com

6. DSP Resource Boards

Aculab
781-433-6000
http://www.aculab.com
(See our enhanced listing in the alphabetical section.)

Ai-Logix, Inc
732-469-0880
http://www.audiocodes.com/blades

PIKA Technologies Inc.
613-591-1555 x388
http://www.pikatechnologies.com

SBE
925-355-2000
http://www.sbei.com

7. Internet Telephony Boards

Aculab
781-433-6000
http://www.aculab.com
(See our enhanced listing in the alphabetical section.)

Ai-Logix, Inc
732-469-0880
http://www.audiocodes.com/blades

AudioCodes
408-441-1175
http://www.audiocodes.com
(See our enhanced listing in the alphabetical section.)

NMS Communications
800-533-6120
http://www.nmscommunications.com

PIKA Technologies Inc.
613-591-1555 x388
http://www.pikatechnologies.com

Zoom Technologies, Inc.
617-535-9383
http://www.zoom.com

8. Modems

Intertex Data
508-385-6335
ihttp://ntertexdata.com

Multi-Tech Systems, Inc.
800-328-9717 x5176
http://www.multitech.com
(See our enhanced listing in the alphabetical section.)

SMC Networks
949-679-8000
http://www.smc.com

Zoom Technologies, Inc.
617-535-9383
http://www.zoom.com

9. Network Interface Cards

SBE
925-355-2000
http://www.sbei.com

SMC Networks
949-679-8000
http://www.smc.com

10. Video Conferencing Equipment

Polycom, Inc.
800-POL-YCOM
http://www.polycom.com

Target Distributing
800-873-5528 x1120
http://www.targetd.com

Telanetix
858-362-2250
http://www.telanetix.com

Toshiba America Information Systems, Telecom Systems Div.
949-583-3700
http://www.telecom.toshiba.com
(See our enhanced listing in the alphabetical section.)

11. Chassis/Enclosures

Crystal Group Inc.
319-378-1636
http://www.crystalpc.com

Diversified Technology
800-443-2667
http://www.dtims.com

Elma Electronic
510-490-7388 x516
http://www.elma.com
(See our enhanced listing in the alphabetical section.)

Motorola Embedded Communications Computing Group
602-437-3623
http://www.motorola.com/computing

12. Computer-less IP Telephony Devices

Multi-Tech Systems, Inc.
800-328-9717 x5176
http://www.multitech.com
(See our enhanced listing in the alphabetical section.)

Unex Technology Corp.
+886-3-5256262 x201
http://www.unex.com.tw

13. Multimedia Headsets/Phonesets

Target Distributing
800-873-5528 x1120
http://www.targetd.com

14. UPS/Power Protection/Management

Falcon Electric, Inc.
800-842-6940
http://www.falconups.com

Hewlett-Packard Company
281-370-0670
http://www.hp.com/go/infrastructure

SOFTWARE

16. Compression Algorithms

Adaptive Digital Technologies, Inc.
610-825-0182
http://adaptivedigital.com

On2 Technologies, Inc.
518-724-3872
http://on2.com

Trinity Convergence
919-433-7000
http://www.trinityconvergence.com

17. Echo Cancellation

Adaptive Digital Technologies, Inc.
610-825-0182
http://adaptivedigital.com

ClearOne Communications
800-707-6994
http://www.clearone.com

PIKA Technologies Inc.
613-591-1555 x388
http://www.pikatechnologies.com

Trinity Convergence
919-433-7000
http://www.trinityconvergence.com

18. Embedded Software Tools

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

20. Internet Telephony API

DiamondWare, Ltd.
480-380-1122
http://www.dw.com

IntelliNet Technologies, Inc.
321-726-0686
http://www.intellinet-tech.com

NMS Communications
800-533-6120
http://www.nmscommunications.com

OPC Marketing, Inc.
972-267-3279 x202
http://www.opc-marketing.com

Softel Communications Inc
877-525-1987
http://www.softel.com

Solegy LLC
212-801-2506
http://www.solegy.com
(See our enhanced listing in the alphabetical section.)

SyChip
972-202-8847
http://www.sychip.com

TeleBright
888-519-1472
http://www.telebright.com

Trinity Convergence
919-433-7000
http://www.trinityconvergence.com

Ubiquity Software Corporation
650-413-7103
http://www.ubiquitysoftware.com

WebPhone
866-320-3077
http://www.webphone.com

21. Java/Java Telephony

BEA Systems Inc.
408-570-8701
http://www.bea.com/wlcom

EyeBill
877 649 5622
http://www.eyebill.net

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

ShoreTel
408-331-3369
http://www.shoretel.com

23. SIP

Aculab
781-433-6000
http://www.aculab.com
(See our enhanced listing in the alphabetical section.)

Alcatel
800-995-2612
http://www.alcatel.com

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.)

Empirix, Inc.
781-266-3285
http://www.empirix.com

Grandstream Networks, Inc.
617-566-9300
http://www.grandstream.com
(See our enhanced listing in the alphabetical section.)

Ingate Systems
603-883-6569
http://www.ingate.com

International Systems Research Co.
650-570-6960
http://www.isrus.com

SEE THE INDEX
Located On Pages 94 & 95

Newport Networks Limited
+44 (0) 1291 635830
http://www.newport-networks.com

Nortel Networks
800-4NO-RTEL
http://www.nortelnetworks.com

PIKA Technologies Inc.
613-591-1555 x388
http://www.pikatechnologies.com

Shenzhen Koncept Technology Development Co.,Ltd
(86)755 82197307 x823
http://www.konceptusa.com

snom technology AG
++49-(0)30-39833 x113
http://www.snom.com
(See our enhanced listing in the alphabetical section.)

Sphere Communications Inc.
847-793-9600 x300
http://www.spherecom.com

SyChip
972-202-8847
http://www.sychip.com

TiVi
+371 7881005
http://www.tivi.com

Trinity Convergence
919-433-7000
http://www.trinityconvergence.com

Ubiquity Software Corporation
650-413-7103
http://www.ubiquitysoftware.com

VoIP Inc.
407-389-3232
http://www.voipincorporated.com

Vonexus Inc.
888-817-5904
http://www.vonexus.com

WebPhone
866-320-3077
http://www.webphone.com

TESTING

24. Simulators

Codima Technologies
610-579-9435
http://www.codimatech.com

GL Communications, Inc.
301-670-4784 x114
http://www.gl.com
(See our enhanced listing in the alphabetical section.)

HEAD acoustics GmbH
+49-2407-5770
http://www.head-acoustics.de

PacketStorm Communications
732-254-2434 x206
http://www.packetstorm.com

RADCOM, Ltd.
201-518-0033 x320
http://www.RADCOM.com
(See our enhanced listing in the alphabetical section.)

Touchstone Technologies Inc.
215-672-6550
http://www.touchstone-inc.com
(See our enhanced listing in the alphabetical section.)

25. Testing Hardware

Empirix, Inc.
781-266-3285
http://www.empirix.com

GL Communications, Inc.
301-670-4784 x114
http://www.gl.com
(See our enhanced listing in the alphabetical section.)

HEAD acoustics GmbH
+49-2407-5770
http://www.head-acoustics.de

Hermon Labs
972-4-628-8001
http://www.hermonlabs.com

Ixia
818-871-1800
http://www.ixiacom.com

JDSU
866-228-3762
http://www.jdsu.com

Network Instruments
952-932-9899
http://www.networkinstruments.com

PacketStorm Communications
732-254-2434 x206
http://www.packetstorm.com

RADCOM, Ltd.
201-518-0033 x320
http://www.RADCOM.com
(See our enhanced listing in the alphabetical section.)

Tektronix, Inc.
503-627-7111
http://www.tektronix.com

Touchstone Technologies Inc.
215-672-6550
http://www.touchstone-inc.com
(See our enhanced listing in the alphabetical section.)

26. Toolkits

GL Communications, Inc.
301-670-4784 x114
http://www.gl.com
(See our enhanced listing in the alphabetical section.)

Psytechnics
978-392-1244
http://www.psytechnics.com

27. Voice Quality Measurement

Codima Technologies
610-579-9435
http://www.codimatech.com

Empirix, Inc.
781-266-3285
http://www.empirix.com

GL Communications, Inc.
301-670-4784 x114
http://www.gl.com
(See our enhanced listing in the alphabetical section.)

HEAD acoustics GmbH
+49-2407-5770
http://www.head-acoustics.de

Hermon Labs
972-4-628-8001
http://www.hermonlabs.com

Ixia
818-871-1800
http://www.ixiacom.com

JDSU
866-228-3762
http://www.jdsu.com

Microtronix Systems Ltd
519-649-4900
http://microtronix.ca

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

PacketStorm Communications
732-254-2434 x206
http://www.packetstorm.com

Psytechnics
978-392-1244
http://www.psytechnics.com

RADCOM, Ltd.
201-518-0033 x320
http://www.RADCOM.com
(See our enhanced listing in the alphabetical section.)

Telchemy Incorporated
770-614-6944
http://www.telchemy.com

Touchstone Technologies Inc.
215-672-6550
http://www.touchstone-inc.com
(See our enhanced listing in the alphabetical section.)

WildPackets
925-937-3200
http://www.wildpackets.com

28. VoIP Testing

Alliance Systems
972-633-3400
http://www.alliancesystems.com
(See our enhanced listing in the alphabetical section.)

Codima Technologies
610-579-9435
http://www.codimatech.com

Datasoftnet
314-258-2902
http://www.datasoftnet.com

Empirix, Inc.
781-266-3285
http://www.empirix.com

GL Communications, Inc.
301-670-4784 x114
http://www.gl.com
(See our enhanced listing in the alphabetical section.)

HEAD acoustics GmbH
+49-2407-5770
http://www.head-acoustics.de

Hermon Labs
972-4-628-8001
http://www.hermonlabs.com

Ixia
818-871-1800
http://www.ixiacom.com

JDSU
866-228-3762
http://www.jdsu.com

Microtronix Systems Ltd
519-649-4900
http://microtronix.ca

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 Instruments
952-932-9899
http://www.networkinstruments.com

PacketStorm Communications
732-254-2434 x206
http://www.packetstorm.com

Psytechnics
978-392-1244
http://www.psytechnics.com

RADCOM, Ltd.
201-518-0033 x320
http://www.RADCOM.com
(See our enhanced listing in the alphabetical section.)

snom technology AG
++49-(0)30-39833 x113
http://www.snom.com
(See our enhanced listing in the alphabetical section.)

Tektronix, Inc.
503-627-7111
http://www.tektronix.com

Touchstone Technologies Inc.
215-672-6550
http://www.touchstone-inc.com
(See our enhanced listing in the alphabetical section.)

WildPackets
925-937-3200
http://www.wildpackets.com

SOLUTIONS

29. Billing/Convergent Billing

Comwave Telecom Inc.
416-663-9700 x303
http://www.comwave.net

Doretel Communications, Inc.
404-755-5721
http://www.doretel.com

EyeBill
877 649 5622
http://www.eyebill.net

Freeway Communications
213-225-2200 x101
http://freeway.com

Go Tek Inc.
416-817-6888
http://www.softswitch.ca

HigherGround, Inc.
818-591-3133 x249
http://www.highergroundinc.com

I.S. Associates, Inc.
800-583-3440 x142
http://www.isassoc.com
(See our enhanced listing in the alphabetical section.)

IVR Technologies, Inc.
213-634-1522
http://www.ivr.com

RAMS Group
416-518-4344
http://www.rams-group.com

Shenzhen Koncept Technology Development Co.,Ltd
(86)755 82197307 x823
http://www.konceptusa.com

Siemens Communications
800-765-6123
http://www.communications.usa.siemens.com/home.html

SMART NETWORK SOLUTIONS
305-808-7361
http://www.smartisvoip.com

Solegy LLC
212-801-2506
http://www.solegy.com
(See our enhanced listing in the alphabetical section.)

STBS
301-585-1200 x117
http://www.stbs.com

SysMaster Corporation
877-900-3993
http://www.sysmaster.com

Tekno Telecom, L.L.C.
630-579-9800 x203
http://www.teknotelecom.com

Traxi Technologies, LLC
212-812-9450 x114
http://www.traxitech.com

TriVium Systems, Inc
877-439-9338 x320
http://www.triviumsys.com

VeriSign
650-961-7500
http://www.verisign.com

Viziqor Solutions
508-248-9896
http://www.viziqor.com

VoiceStamps.com
469-272-4688 x1
http://www.voicestamps.com

30. Client Software (Internet Phones)

International Systems Research Co.
650-570-6960
http://www.isrus.com

Orative
408-625-3100
http://www.orative.com

31. CTI

Accurate Always
800-828-9428 x1
http://www.accuratealways.com

Ai-Logix, Inc
732-469-0880
http://www.audiocodes.com/blades

BCE Elix
501-768-1000
http://www.bceelix.com

HigherGround, Inc.
818-591-3133 x249
http://www.highergroundinc.com

Pronexus Inc.
613-271-8989
http://www.pronexus.com

Samsung BCS
972-761-7000
http://www.samsung.com/bcs
(See our enhanced listing in the alphabetical section.)

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

TriVium Systems, Inc
877-439-9338 x320
http://www.triviumsys.com

UCN, Inc.
888-UCN-0002
http://www.ucn.net
(See our enhanced listing in the alphabetical section.)

32. Directory Services

Orative
408-625-3100
http://www.orative.com

33. Internet ACD

Aspect Software
888-412-7728
http://www.aspect.com

CosmoCom, Inc.
631-940-4200
http://www.cosmocom.com

UCN, Inc.
888-UCN-0002
http://www.ucn.net
(See our enhanced listing in the alphabetical section.)

zCONNEX GROUP
800-715-9990
http://www.zconnex.com

35. Internetworking

Canecu Trading Inc
416-238-2329

Incognito Software
604-688-4332 x860
http://www.incognito.com

36. LAN-Based Telephony

Aastra Telecom
905-760-4200
http://www.aastra.com

AltiGen Communications, Inc.
510-252-9712
http://www.altigen.com

BandTel for Flawless VoIP
949-640-9700
http://www.bandtel.com

Dirigosoft Corporation
877-870-1234
http://www.dirigosoft.com
(See our enhanced listing in the alphabetical section.)

FacetCorp
800-235-9901
http://www.facetcorp.com

M5 Networks
646-230-5000
http://www.m5net.com

ShoreTel
408-331-3369
http://www.shoretel.com

SOYO Group, Inc.
909-292-2500 x2503
http://www.soyogroup.com

Sphere Communications Inc.
847-793-9600 x300
http://www.spherecom.com

Tadiran America
866-595-4900
http://www.tadiranamerica.com

TelStrat
972-543-3500
http://www.TelStrat.com

Unex Technology Corp.
+886-3-5256262 x201
http://www.unex.com.tw

37. Multimedia

ARRIS
678-473-8327
http://www.arrisi.com

BCE Elix
501-768-1000
http://www.bceelix.com

Noble Systems Corporation
888-866-2538 x300
http://www.noblesys.com

Siemens Communications
800-765-6123
http://www.communications.usa.siemens.com/home.html

38. Network Management

Allot Communications
952-944-3100
http://www.allot.com
(See our enhanced listing in the alphabetical section.)

Canecu Trading Inc
416-238-2329

Codima Technologies
610-579-9435
http://www.codimatech.com

General Telecom
646-328-5800
http://www.gentel.net

I.S. Associates, Inc.
800-583-3440 x142
http://www.isassoc.com
(See our enhanced listing in the alphabetical section.)

Incognito Software
604-688-4332 x860
http://www.incognito.com

Ixia
818-871-1800
http://www.ixiacom.com

JDSU
866-228-3762
http://www.jdsu.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.)

Netcordia
415-389-1409
http://www.netcordia.com

NetScout Systems
888-999-5946
http://www.netscout.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

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

TeleBright
888-519-1472
http://www.telebright.com

WildPackets
925-937-3200
http://www.wildpackets.com

39. OSS

CommPartners
702-367-8647 x1017
http://www.commpartners.us

Go Tek Inc.
416-817-6888
http://www.softswitch.ca

I.S. Associates, Inc.
800-583-3440 x142
http://www.isassoc.com
(See our enhanced listing in the alphabetical section.)

Incognito Software
604-688-4332 x860
http://www.incognito.com

NetScout Systems
888-999-5946
http://www.netscout.com

RAMS Group
416-518-4344
http://www.rams-group.com

Shenzhen Koncept 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

Viziqor Solutions
508-248-9896
http://www.viziqor.com

40. Quality of Service

Accurate Always
800-828-9428 x1
http://www.accuratealways.com

Allot Communications
952-944-3100
http://www.allot.com
(See our enhanced listing in the alphabetical section.)

Converged Access Inc.
978-742-1400 x404
http://www.convergedaccess.com

Converged Access Inc.
978-742-1400
http://www.convergedaccess.com

Empirix, Inc.
781-266-3285
http://www.empirix.com

HigherGround, Inc.
818-591-3133 x249
http://www.highergroundinc.com

Ixia
818-871-1800
http://www.ixiacom.com

JDSU
866-228-3762
http://www.jdsu.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.)

NetScout Systems
888-999-5946
http://www.netscout.com

NexTone Communications
240-912-1310
http://www.nextone.com

Psytechnics
978-392-1244
http://www.psytechnics.com

Tekno Telecom, L.L.C.
630-579-9800 x203
http://www.teknotelecom.com

Telanetix
858-362-2250
http://www.telanetix.com

Telchemy Incorporated
770-614-6944
http://www.telchemy.com

TriVium Systems, Inc
877-439-9338 x320
http://www.triviumsys.com

U4EA Technologies
+441173736758
http://www.u4eatech.com

Witness Systems
770-754-8651
http://www.witness.com

Xelor Software
603-327-0400
http://www.xelorsoftware.com

zCONNEX GROUP
800-715-9990
http://www.zconnex.com

41. Security

3Com
508-323-5000
http://www.3com.com

BorderWare Technologies Inc.
905-804-1855 x245
http://www.borderware.com

Check Point Software Technologies
650-628-2000
http://www.checkpoint.com

Converged Access Inc.
978-742-1400
http://www.convergedaccess.com

Converged Access Inc.
978-742-1400 x404
http://www.convergedaccess.com

Encore Networks
703-318-4366
http://www.encorenetworks.com

ENGATE Technology Corporation
408-494-8310
http://www.engate.com

Ingate Systems
603-883-6569
http://www.ingate.com

snom technology AG
++49-(0)30-39833 x113
http://www.snom.com
(See our enhanced listing in the alphabetical section.)

VoIPshield Systems
613-224-4443 x317
http://www.voipshield.com

42. Service Creation Environment

Allot Communications
952-944-3100
http://www.allot.com
(See our enhanced listing in the alphabetical section.)

Common Voices, Inc
617-286-1600
http://www.commonvoices.com

Pactolus Communications Software
508-616-0900
http://www.Pactolus.com

Ubiquity Software Corporation
650-413-7103
http://www.ubiquitysoftware.com

43. Service Level Management

Allot Communications
952-944-3100
http://www.allot.com
(See our enhanced listing in the alphabetical section.)

NetScout Systems
888-999-5946
http://www.netscout.com

RADCOM, Ltd.
201-518-0033 x320
http://www.RADCOM.com
(See our enhanced listing in the alphabetical section.)

Telchemy Incorporated
770-614-6944
http://www.telchemy.com

44. SS7 Solution

AudioCodes
408-441-1175
http://www.audiocodes.com
(See our enhanced listing in the alphabetical section.)

Doretel Communications, Inc.
404-755-5721
http://www.doretel.com

IntelliNet Technologies, Inc.
321-726-0686
http://www.intellinet-tech.com

NMS Communications
800-533-6120
http://www.nmscommunications.com

Sevis Systems
770-536-2425
http://www.sevis.com

Tekno Telecom, L.L.C.
630-579-9800 x203
http://www.teknotelecom.com

Telesis A.S.
+90 312 3840394
http://www.stillink.com

VeriSign
650-961-7500
http://www.verisign.com

45. Voice Over Cable

ARRIS
678-473-8327
http://www.arrisi.com

Canecu Trading Inc
416-238-2329

Cicero Networks
+353 1 6636510
http://www.ciceronetworks.com

Comwave Telecom Inc.
416-663-9700 x303
http://www.comwave.net

Go Tek Inc.
416-817-6888
http://www.softswitch.ca

Mindspeed Technologies, Inc.
949-579-3650
http://www.mindspeed.com

Shenzhen Koncept Technology Development Co.,Ltd
(86)755 82197307 x823
http://www.konceptusa.com

VoX Communications
813-217-9777
http://www.voxcorp.net

(See our enhanced listing in the alphabetical section.)

46. Voice Over DSL

Canecu Trading Inc
416-238-2329

Centillium Communications, Inc.
510-771-3700
http://www.centillium.com

Cicero Networks
+353 1 6636510
http://www.ciceronetworks.com

Converged Access Inc.
978-742-1400
http://www.convergedaccess.com

Converged Access Inc.
978-742-1400 x404
http://www.convergedaccess.com

Go Tek Inc.
416-817-6888
http://www.softswitch.ca

gr8fone.net
919898008655
http://gr8fone.net

Mindspeed Technologies, Inc.
949-579-3650
http://www.mindspeed.com

Netcentrex Converged IP Communications, Comverse
+33 (0)1 58 71 33 33
http://www.netcentrex.net
(See our enhanced listing in the alphabetical section.)

VoX Communications
813-217-9777
http://www.voxcorp.net
(See our enhanced listing in the alphabetical section.)

47. Web-Based Customer Service

BCE Elix
501-768-1000
http://www.bceelix.com

CommPartners
702-367-8647 x1017
http://www.commpartners.us

Givex Corporation
877-478-7733
http://www.givex.com

Vonexus Inc.
888-817-5904
http://www.vonexus.com

Witness Systems
770-754-8651
http://www.witness.com

APPLICATIONS & SERVICES

49. Application Sharing/Collaborative Computing

Alcatel
800-995-2612
http://www.alcatel.com

Forum Communications International
972-680-0700 x1581
http://www.forum-com.com

iKnowWare
512-215-4305
http://www.iKnowWare.com

Pandora Networks
800-805-0558
http://www.pandoranetworks.com
(See our enhanced listing in the alphabetical section.)

WiredRed Software
858-715-0970
http://www.wiredred.com

50. Audio Conferencing

1Number4U
866-824-8245
http://www.1number4u.com

AccessLine Communications
206-654-1013
http://www.accessline.com

Acoustic Magic
978-440-9384
http://www.AcousticMagic.com

Advanced Communications Solutions
407-788-9845

Alcatel
800-995-2612
http://www.alcatel.com

Ascendent Systems
888-507-1777
http://www.ascendentsystems.com

ClearOne Communications
800-707-6994
http://www.clearone.com

Common Voices, Inc
617-286-1600
http://www.commonvoices.com

CommuniGate Systems
415-383-7164
http://www.communigate.com
(See our enhanced listing in the alphabetical section.)

DiamondWare, Ltd.
480-380-1122
http://www.dw.com

Epygi Technologies
972-692-1166 x38
http://www.epygi.com

Forum Communications International
972-680-0700 x1581
http://www.forum-com.com

iKnowWare
512-215-4305
http://www.iKnowWare.com

Pactolus Communications Software
508-616-0900
http://www.Pactolus.com

Telanetix
858-362-2250
http://www.telanetix.com

Teltronics, Inc.
941-753-5000 x7315
http://www.teltronics.com

TOUBATEL
+33172100204
http://www.toubatel.com

Ubiquity Software Corporation
650-413-7103
http://www.ubiquitysoftware.com

WiredRed Software
858-715-0970
http://www.wiredred.com

51. Customer Self-Provisioning

I.S. Associates, Inc.
800-583-3440 x142
http://www.isassoc.com
(See our enhanced listing in the alphabetical section.)

IVR Technologies, Inc.
213-634-1522
http://www.ivr.com

STBS
301-585-1200 x117
http://www.stbs.com

52. Distance Learning

Acoustic Magic
978-440-9384
http://www.AcousticMagic.com

ClearOne Communications
800-707-6994
http://www.clearone.com

Forum Communications International
972-680-0700 x1581
http://www.forum-com.com

MaraStar Communications
610-902-0080 x125
http://www.marastar.com

WiredRed Software
858-715-0970
http://www.wiredred.com

53. Fax Broadcasting

AnswerNet Network
800-411-5777
http://www.answernet.com

FaxBack, Inc.
503-597-5355
http://www.faxback.com

Pangea Communications Corp.
503-221-2121
http://www.pangea-comm.com

54. Fax On Demand

1Number4U
866-824-8245
http://www.1number4u.com

AnswerNet Network
800-411-5777
http://www.answernet.com

Associated Call Centers
800-610-5262
http://www.inboundacc.com

FaxBack, Inc.
503-597-5355
http://www.faxback.com

55. International Callback

CallingPlaces, Ltd
44-2088106609
http://www.callingplaces.com

IVR Technologies, Inc.
213-634-1522
http://www.ivr.com

56. Internet Access To Live Agents (Click to Talk)

Accton Technology
+886-3-5770270
http://www.accton.com

Associated Call Centers
800-610-5262
http://www.inboundacc.com

Catalog Retail Marketing Int'l, Inc. (CRMI)
802-334-1000 x203
http://www.crmi.cc

CommuniGate Systems
415-383-7164
http://www.communigate.com
(See our enhanced listing in the alphabetical section.)

TOUBATEL
+33172100204
http://www.toubatel.com

VoIP Inc.
407-389-3232
http://www.voipincorporated.com

zCONNEX GROUP
800-715-9990
http://www.zconnex.com

57. Internet Call Waiting

TeleVoce Inc
408-627-4044
http://www.televoce.com

58. Internet Fax

Common Voices, Inc
617-286-1600
http://www.commonvoices.com

FaxBack, Inc.
503-597-5355
http://www.faxback.com

Pangea Communications Corp.
503-221-2121
http://www.pangea-comm.com

Quintum Technologies, Inc.
732-460-9000 x238
http://www.quintum.com

59. IP Centrex

1SourceVoIP
800-777-8197
http://www.1SourceVoIP.com

CallingPlaces, Ltd
44-2088106609
http://www.callingplaces.com

Clearpath Communications, LLC
248-724-4444
http://www.clearpath1.com

CommuniGate Systems
415-383-7164
http://www.communigate.com
(See our enhanced listing in the alphabetical section.)

Freeway Communications
213-225-2200 x101
http://freeway.com

M5 Networks
646-230-5000
http://www.m5net.com

Natural Convergence
613-280-2000
http://www.naturalconvergence.com

Netcentrex Converged IP Communications, Comverse
+33 (0)1 58 71 33 33
http://www.netcentrex.net
(See our enhanced listing in the alphabetical section.)

Newport Networks Limited
+44 (0) 1291 635830
http://www.newport-networks.com

Nuvio
816-444-4422
http://www.nuvio.com

Pandora Networks
800-805-0558
http://www.pandoranetworks.com
(See our enhanced listing in the alphabetical section.)

Tekelec
888-628-5521
http://www.tekelec.com

TOUBATEL
+33172100204
http://www.toubatel.com

WebPhone
866-320-3077
http://www.webphone.com

60. IP Multicasting

Aastra Telecom
905-760-4200
http://www.aastra.com

SES AMERICOM
609-987-4555

61. IP Video Conferencing

Acoustic Magic
978-440-9384
http://www.AcousticMagic.com

Advanced Communications Solutions
407-788-9845

Go Tek Inc.
416-817-6888
http://www.softswitch.ca

Siemens Communications
800-765-6123
http://www.communications.usa.siemens.com/home.html

Telanetix
858-362-2250
http://www.telanetix.com

WiredRed Software
858-715-0970
http://www.wiredred.com

62. Least-Cost Routing

Comwave Telecom Inc.
416-663-9700 x303
http://www.comwave.net

CosmoCom, Inc.
631-940-4200
http://www.cosmocom.com

SEE THE INDEX
Located On Pages 94 & 95

EyeBill
877 649 5622
http://www.eyebill.net

General Telecom
646-328-5800
http://www.gentel.net

Newport Networks Limited
+44 (0) 1291 635830
http://www.newport-networks.com

TransNexus
404-526-6060
http://www.transnexus.com

63. One Number/Follow Me

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

Applied Voice & Speech Technologies (AVST)
949-699-2300
http://www.avst.com

Ascendent Systems
888-507-1777
http://www.ascendentsystems.com

CallingPlaces, Ltd
44-2088106609
http://www.callingplaces.com

Clearpath Communications, LLC
248-724-4444
http://www.clearpath1.com

Common Voices, Inc
617-286-1600
http://www.commonvoices.com

iotum
613-482-9099
http://iotum.com

IVR Technologies, Inc.
213-634-1522
http://www.ivr.com

Nuvio
816-444-4422
http://www.nuvio.com

64. Prepaid Calling Cards

CallingPlaces, Ltd
44-2088106609
http://www.callingplaces.com

EyeBill
877 649 5622
http://www.eyebill.net

IVR Technologies, Inc.
213-634-1522
http://www.ivr.com

Pactolus Communications Software
508-616-0900
http://www.Pactolus.com

Pipeline Telecom Inc.
321-409-9971 x11
http://www.pipelinetelecom.com

RNK Telecom
781-613-6000
http://www.rnktel.com

SOYO Group, Inc.
909-292-2500 x2503
http://www.soyogroup.com

STBS
301-585-1200 x117
http://www.stbs.com

WebPhone
866-320-3077
http://www.webphone.com

65. SOHO

1SourceVoIP
800-777-8197
http://www.1SourceVoIP.com

ClearOne Communications
800-707-6994
http://www.clearone.com

RNK Telecom
781-613-6000
http://www.rnktel.com

TeleVoce Inc
408-627-4044
http://www.televoce.com

66. Streaming Audio/Video

Accurate Always
800-828-9428 x1
http://www.accuratealways.com

CapRock Communications
832-668-2300
http://www.caprock.com

Siemens Communications
800-765-6123
http://www.communications.usa.siemens.com/home.html

SysMaster Corporation
877-900-3993
http://www.sysmaster.com

TiVi
+371 7881005
http://www.tivi.com

67. Telecommuting

AccessLine Communications
206-654-1013
http://www.accessline.com

Acoustic Magic
978-440-9384
http://www.AcousticMagic.com

Adomo
408-996-7086
http://www.adomo.com

ClearOne Communications
800-707-6994
http://www.clearone.com

Dirigosoft Corporation
877-870-1234
http://www.dirigosoft.com
(See our enhanced listing in the alphabetical section.)

Empire Communications
707-545-8300
http://www.empirecomm.com

Forum Communications International
972-680-0700 x1581
http://www.forum-com.com

TelStrat
972-543-3500
http://www.TelStrat.com

WiredRed Software
858-715-0970
http://www.wiredred.com

68. Unified/Integrated Messaging

AccessLine Communications
206-654-1013
http://www.accessline.com

Adomo
408-996-7086
http://www.adomo.com

Advanced Communications Solutions
407-788-9845

Alcatel
800-995-2612
http://www.alcatel.com

AnswerNet Network
800-411-5777
http://www.answernet.com

Applied Voice & Speech Technologies (AVST)
949-699-2300
http://www.avst.com

Ascendent Systems
888-507-1777
http://www.ascendentsystems.com

Associated Call Centers
800-610-5262
http://www.inboundacc.com

Avaya Inc.
800-784-6104
http://www.avaya.com

CallingPlaces, Ltd
44-2088106609
http://www.callingplaces.com

Common Voices, Inc
617-286-1600
http://www.commonvoices.com

CommuniGate Systems
415-383-7164
http://www.communigate.com
(See our enhanced listing in the alphabetical section.)

Empire Communications
707-545-8300
http://www.empirecomm.com

FacetCorp
800-235-9901
http://www.facetcorp.com

iKnowWare
512-215-4305
http://www.iKnowWare.com

Nortel Networks
800-4NO-RTEL
http://www.nortelnetworks.com

Orative
408-625-3100
http://www.orative.com

Pactolus Communications Software
508-616-0900
http://www.Pactolus.com

Pandora Networks
800-805-0558
http://www.pandoranetworks.com
(See our enhanced listing in the alphabetical section.)

Pangea Communications Corp.
503-221-2121
http://www.pangea-comm.com

STBS
301-585-1200 x117
http://www.stbs.com

Teltronics, Inc.
941-753-5000 x7315
http://www.teltronics.com

Toshiba America Information Systems, Telecom Systems Div.
949-583-3700
http://www.telecom.toshiba.com
(See our enhanced listing in the alphabetical section.)

Vonexus Inc.
888-817-5904
http://www.vonexus.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

Applied Voice & Speech Technologies (AVST)
949-699-2300
http://www.avst.com

Associated Call Centers
800-610-5262
http://www.inboundacc.com

Dirigosoft Corporation
877-870-1234
http://www.dirigosoft.com
(See our enhanced listing in the alphabetical section.)

GM Voices, Inc.
770-752-4500
http://www.gmvoices.com

iotum
613-482-9099
http://iotum.com

Softel Communications Inc
877-525-1987
http://www.softel.com

VoiceStamps.com
469-272-4688 x1
http://www.voicestamps.com

70. Virtual/Distributed Call Center

1Number4U
866-824-8245
http://www.1number4u.com

AnswerNet Network
800-411-5777
http://www.answernet.com

Aspect Software
888-412-7728
http://www.aspect.com

CosmoCom, Inc.
631-940-4200
http://www.cosmocom.com

Dirigosoft Corporation
877-870-1234
http://www.dirigosoft.com
(See our enhanced listing in the alphabetical section.)

Noble Systems Corporation
888-866-2538 x300
http://www.noblesys.com

Nortel Networks
800-4NO-RTEL
http://www.nortelnetworks.com

Nuvio
816-444-4422
http://www.nuvio.com

Pandora Networks
800-805-0558
http://www.pandoranetworks.com
(See our enhanced listing in the alphabetical section.)

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

TelStrat
972-543-3500
http://www.TelStrat.com

UCN, Inc.
888-UCN-0002
http://www.ucn.net
(See our enhanced listing in the alphabetical section.)

zCONNEX GROUP
800-715-9990
http://www.zconnex.com

71. Virtual Private Networks

CapRock Communications
832-668-2300
http://www.caprock.com

Check Point Software Technologies
650-628-2000
http://www.checkpoint.com

Encore Networks
703-318-4366
http://www.encorenetworks.com

Kentrox
503-350-6001
http://www.kentrox.com

Nortel Networks
800-4NO-RTEL
http://www.nortelnetworks.com

SES AMERICOM
609-987-4555

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

Associated Call Centers
800-610-5262
http://www.inboundacc.com

Avaya Inc.
800-784-6104
http://www.avaya.com

Catalog Retail Marketing Int'l, Inc. (CRMI)
802-334-1000 x203
http://www.crmi.cc

CosmoCom, Inc.
631-940-4200
http://www.cosmocom.com

Empire Communications
707-545-8300
http://www.empirecomm.com

iKnowWare
512-215-4305
http://www.iKnowWare.com

Noble Systems Corporation
888-866-2538 x300
http://www.noblesys.com

Nortel Networks
800-4NO-RTEL
http://www.nortelnetworks.com

Softel Communications Inc
877-525-1987
http://www.softel.com

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

73. E911

911 Enable
514-745-2143
http://www.911enable.com
(See our enhanced listing in the alphabetical section.)

WIRELESS

74. Handsets/PDAs

Aastra Telecom
905-760-4200
http://www.aastra.com

Pipeline Telecom Inc.
321-409-9971 x11
http://www.pipelinetelecom.com

SpectraLink
303-583-5342
http://www.spectralink.com

75. Location-Based Services (Mobile e-commerce)

IntelliNet Technologies, Inc.
321-726-0686
http://www.intellinet-tech.com

TeleBright
888-519-1472
http://www.telebright.com

76. Short Message Service

Sevis Systems
770-536-2425
http://www.sevis.com

VeriSign
650-961-7500
http://www.verisign.com

77. Third-Generation Wireless (3G)

IntelliNet Technologies, Inc.
321-726-0686
http://www.intellinet-tech.com

Multi-Tech Systems, Inc.
800-328-9717 x5176
http://www.multitech.com
(See our enhanced listing in the alphabetical section.)

Sevis Systems
770-536-2425
http://www.sevis.com

TiVi
+371 7881005
http://www.tivi.com

VeriSign
650-961-7500
http://www.verisign.com

78. Wireless Data/Internet/WAP

Accton Technology
+886-3-5770270
http://www.accton.com

International Systems Research Co.
650-570-6960
http://www.isrus.com

SES AMERICOM
609-987-4555

79. Wireless Internet Telephony

Cicero Networks
+353 1 6636510
http://www.ciceronetworks.com

Convergin
+972-9-951 7771
http://www.convergin.com

DiamondWare, Ltd.
480-380-1122
http://www.dw.com

International Systems Research Co.
650-570-6960
http://www.isrus.com

Mindspeed Technologies, Inc.
949-579-3650
http://www.mindspeed.com

Orative
408-625-3100
http://www.orative.com

SES AMERICOM
609-987-4555

SpectraLink
303-583-5342
http://www.spectralink.com

SyChip
972-202-8847
http://www.sychip.com

TiVi
+371 7881005
http://www.tivi.com

Unex Technology Corp.
+886-3-5256262 x201
http://www.unex.com.tw

Vonexus Inc.
888-817-5904
http://www.vonexus.com

80. Wireless LAN

CapRock Communications
832-668-2300
http://www.caprock.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

SyChip
972-202-8847
http://www.sychip.com

Unex Technology Corp.
+886-3-5256262 x201
www.unex.com.tw

WildPackets
925-937-3200
http://www.wildpackets.com

NETWORK EQUIPMENT

81. Aggregator/Concentrator

ARRIS
678-473-8327
http://www.arrisi.com

Telco Systems, a BATM Company
800-221-2849 x2250
http://www.telco.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

Natural Convergence
613-280-2000
http://www.naturalconvergence.com

Netcentrex Converged IP Communications, Comverse
+33 (0)1 58 71 33 33
http://www.netcentrex.net
(See our enhanced listing in the alphabetical section.)

Pactolus Communications Software
508-616-0900
http://www.Pactolus.com

Tekelec
888-628-5521
http://www.tekelec.com

Vertical Communications
617-354-0600
http://www.vertical.com

83. Bridges

Polycom, Inc.
800-POL-YCOM
http://www.polycom.com

Softel Communications Inc
877-525-1987
http://www.softel.com

84. Carrier Class Gateways

GoHigh Data Networks Technology Co., Ltd.
+8610-62302956
http://www.datangnetwork.com
(See our enhanced listing in the alphabetical section.)

MERA Systems, Inc.
866-644-3051 x5973
http://www.mera-systems.com

Stratus Technologies
978-461-7000
http://stratustelecom.com

86. CSU/DSU

ADTRAN, Inc.
256-963-8000
http://www.adtran.com

87. Data-Enabled PBX

OPC Marketing, Inc.
972-267-3279 x202
http://www.opc-marketing.com

Rhino Equipment Corp.
480-940-1826 x6311
http://www.rhinoequipment.com

Vertical Communications
617-354-0600
http://www.vertical.com

88. Edge Access Device

ARRIS
678-473-8327
http://www.arrisi.com

Comtico
+45 7027 9299
http://www.comtico.com

Telco Systems, a BATM Company
800-221-2849 x2250
http://www.telco.com

U4EA Technologies
+441173736758
http://www.u4eatech.com

89. Fax Servers

FaxBack, Inc.
503-597-5355
http://www.faxback.com

OPC Marketing, Inc.
972-267-3279 x202
http://www.opc-marketing.com

90. Firewalls

ADTRAN, Inc.
256-963-8000
http://www.adtran.com

BorderWare Technologies Inc.
905-804-1855 x245
http://www.borderware.com

Check Point Software Technologies
650-628-2000
http://www.checkpoint.com

Converged Access Inc.
978-742-1400
http://www.convergedaccess.com

Ingate Systems
603-883-6569
http://www.ingate.com

Intertex Data
508-385-6335
http://intertexdata.com

Kentrox
503-350-6001
http://www.kentrox.com

91. Gatekeeper

Polycom, Inc.
800-POL-YCOM
http://www.polycom.com

Quintum Technologies, Inc.
732-460-9000 x238
http://www.quintum.com

92. Integrated Access Device

ADTRAN, Inc.
256-963-8000
http://www.adtran.com

Comtico
+45 7027 9299
http://www.comtico.com

Converged Access Inc.
978-742-1400
http://www.convergedaccess.com

Converged Access Inc.
978-742-1400 x404
http://www.convergedaccess.com

Encore Networks
703-318-4366
http://www.encorenetworks.com

Telco Systems, a BATM Company
800-221-2849 x2250
http://www.telco.com

U4EA Technologies
+441173736758
http://www.u4eatech.com

93. Internet Telephony Appliances

3Com
508-323-5000
http://www.3com.com

Aastra Telecom
905-760-4200
http://www.aastra.com

ABP Technology
972-831-1600
http://www.abptech.com
(See our enhanced listing in the alphabetical section.)

Action Solutions
480-924-4550
http://www.actionsolutions.com

Adomo
408-996-7086
http://www.adomo.com

Alliance Systems
972-633-3400
http://www.alliancesystems.com
(See our enhanced listing in the alphabetical section.)

ARRIS
678-473-8327
http://www.arrisi.com

Comtico
+45 7027 9299
http://www.comtico.com

Grandstream Networks, Inc.
617-566-9300
http://www.grandstream.com
(See our enhanced listing in the alphabetical section.)

Incognito Software
604-688-4332 x860
http://www.incognito.com

Ingate Systems
603-883-6569
http://www.ingate.com

Linksys, a Division of Cisco Systems
408-853-7682
http://www.linksys.com

pbxnsip inc.
978-364-0072 x111
http://www.pbxnsip.com

Target Distributing
800-873-5528 x1120
http://www.targetd.com

Zoom Technologies, Inc.
617-535-9383
http://www.zoom.com

94. Internet Telephony Gateways

ABP Technology
972-831-1600
http://www.abptech.com
(See our enhanced listing in the alphabetical section.)

Aculab
781-433-6000
http://www.aculab.com
(See our enhanced listing in the alphabetical section.)

Alliance Systems
972-633-3400
http://www.alliancesystems.com
(See our enhanced listing in the alphabetical section.)

Allworx
585-421-3850 x124
http://www.allworx.com
(See our enhanced listing in the alphabetical section.)

AudioCodes
408-441-1175
http://www.audiocodes.com
(See our enhanced listing in the alphabetical section.)

Comtico
+45 7027 9299
http://www.comtico.com

Contek Networks, Inc.
510-342-5700
http://www.conteknet.com

Diversified Technology
800-443-2667
http://www.dtims.com

Epygi Technologies
972-692-1166 x38
http://www.epygi.com

Grandstream Networks, Inc.
617-566-9300
http://www.grandstream.com
(See our enhanced listing in the alphabetical section.)

Intertex Data
508-385-6335
http://intertexdata.com

Linksys, a Division of Cisco Systems
408-853-7682
http://www.linksys.com

Multi-Tech Systems, Inc.
800-328-9717 x5176
http://www.multitech.com
(See our enhanced listing in the alphabetical section.)

Quintum Technologies, Inc.
732-460-9000 x238
http://www.quintum.com

Rhino Equipment Corp.
480-940-1826 x6311
http://www.rhinoequipment.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

Target Distributing
800-873-5528 x1120
http://www.targetd.com

Telesis A.S.
+90 312 3840394
http://www.stillink.com

TeleVoce Inc
408-627-4044
http://www.televoce.com

VegaStream
858-824-6388
http://www.vegastream.com

95. IP-Enabled PBX

1SourceVoIP
800-777-8197
http://www.1SourceVoIP.com

3Com
508-323-5000
http://www.3com.com

Alcatel
800-995-2612
http://www.alcatel.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.ascendentsystems.com

Avaya Inc.
800-784-6104
http://www.avaya.com

Bway.net
212-982-9800
http://www.bway.net

Dirigosoft Corporation
877-870-1234
http://www.dirigosoft.com
(See our enhanced listing in the alphabetical section.)

Empire Communications
707-545-8300
http://www.empirecomm.com

Epygi Technologies
972-692-1166 x38
http://www.epygi.com

FacetCorp
800-235-9901
http://www.facetcorp.com

Intertex Data
508-385-6335
http://intertexdata.com

Linksys, a Division of Cisco Systems
408-853-7682
http://www.linksys.com

M5 Networks
646-230-5000
http://www.m5net.com

MERA Systems, Inc.
866-644-3051 x5973
http://www.mera-systems.com

NEC Unified Solutions, Inc.
214-262-6384
http://www.necunifiedsolutions.com
(See our enhanced listing in the alphabetical section.)

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
(See our enhanced listing in the alphabetical section.)

ShoreTel
408-331-3369
http://www.shoretel.com

Spanlink Communications
763-971-2000
http://www.spanlink.com
(See our enhanced listing in the alphabetical section.)

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

Teltronics, Inc.
941-753-5000 x7315
http://www.teltronics.com

Toshiba America Information Systems, Telecom Systems Div.
949-583-3700
http://www.telecom.toshiba.com
(See our enhanced listing in the alphabetical section.)

Vertical Communications
617-354-0600
http://www.vertical.com

Vonexus Inc.
888-817-5904
http://www.vonexus.com

96. IP Phone (SIP, H.323, Ethernet)

Aastra Telecom
905-760-4200
http://www.aastra.com

ABP Technology
972-831-1600
http://www.abptech.com
(See our enhanced listing in the alphabetical section.)

ADTRAN, Inc.
256-963-8000
http://www.adtran.com

AltiGen Communications, Inc.
510-252-9712
http://www.altigen.com

Avaya Inc.
800-784-6104
http://www.avaya.com

Comtico
+45 7027 9299
http://www.comtico.com

Contek Networks, Inc.
510-342-5700
http://www.conteknet.com

GoHigh Data Networks Technology Co., Ltd.
+8610-62302956
http://www.datangnetwork.com
(See our enhanced listing in the alphabetical section.)

Grandstream Networks, Inc.
617-566-9300
http://www.grandstream.com
(See our enhanced listing in the alphabetical section.)

Linksys, a Division of Cisco Systems
408-853-7682
http://www.linksys.com

Microtronix Systems Ltd
519-649-4900
http://microtronix.ca

Polycom, Inc.
800-POL-YCOM
http://www.polycom.com

ShoreTel
408-331-3369
http://www.shoretel.com

snom technology AG
++49-(0)30-39833 x113
http://www.snom.com
(See our enhanced listing in the alphabetical section.)

SpectraLink
303-583-5342
http://www.spectralink.com

TeleVoce Inc
408-627-4044
http://www.televoce.com

Teltronics, Inc.
941-753-5000 x7315
http://www.teltronics.com

Toshiba America Information Systems, Telecom Systems Div.
949-583-3700
http://www.telecom.toshiba.com
(See our enhanced listing in the alphabetical section.)

Vertical Communications
617-354-0600
http://www.vertical.com

Zoom Technologies, Inc.
617-535-9383
http://www.zoom.com

97. Media Gateway

ABP Technology
972-831-1600
http://www.abptech.com
(See our enhanced listing in the alphabetical section.)

Alliance Systems
972-633-3400
http://www.alliancesystems.com
(See our enhanced listing in the alphabetical section.)

AudioCodes
408-441-1175
http://www.audiocodes.com
(See our enhanced listing in the alphabetical section.)

Cantata Technology
781-449-4100
http://www.cantata.com
(See our enhanced listing in the alphabetical section.)

Centillium Communications, Inc.
510-771-3700
http://www.centillium.com

GoHigh Data Networks Technology Co., Ltd.
+8610-62302956
http://www.datangnetwork.com
(See our enhanced listing in the alphabetical section.)

Grandstream Networks, Inc.
617-566-9300
http://www.grandstream.com
(See our enhanced listing in the alphabetical section.)

Motorola Embedded Communications Computing Group
602-437-3623
http://www.motorola.com/computing

Quintum Technologies, Inc.
732-460-9000 x238
http://www.quintum.com

SBE
925-355-2000
http://www.sbei.com

Tekelec
888-628-5521
http://www.tekelec.com

Telesis A.S.
+90 312 3840394
http://www.stillink.com

U4EA Technologies
+441173736758
http://www.u4eatech.com

98. Multipoint Control Unit

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.)

FacetCorp
800-235-9901
http://www.facetcorp.com

Samsung BCS
972-761-7000
http://www.samsung.com/bcs
(See our enhanced listing in the alphabetical section.)

ShoreTel
408-331-3369
http://www.shoretel.com

Sphere Communications Inc.
847-793-9600 x300
http://www.spherecom.com

Tadiran America
866-595-4900
http://www.tadiranamerica.com

Vertical Communications
617-354-0600
http://www.vertical.com

101. Programmable Switches

3Com
508-323-5000
http://www.3com.com

Cantata Technology
781-449-4100
http://www.cantata.com
(See our enhanced listing in the alphabetical section.)

Carrius Technologies, Inc.
214-572-7800
http://www.carriustech.com

102. Remote Access Concentrators

Stampede Technologies
937-291-5035
http://www.stampede.com

TelStrat
972-543-3500
http://www.TelStrat.com

103. Routers

3Com
508-323-5000
http://www.3com.com

ADTRAN, Inc.
256-963-8000
http://www.adtran.com

Aspect Software
888-412-7728
http://www.aspect.com

Encore Networks
703-318-4366
http://www.encorenetworks.com

Epygi Technologies
972-692-1166 x38
http://www.epygi.com

Intertex Data
508-385-6335
http://intertexdata.com

Kentrox
503-350-6001
http://www.kentrox.com

Linksys, a Division of Cisco Systems
408-853-7682
http://www.linksys.com

Multi-Tech Systems, Inc.
800-328-9717 x5176
http://www.multitech.com
(See our enhanced listing in the alphabetical section.)

SMC Networks
949-679-8000
http://www.smc.com

SOYO Group, Inc.
909-292-2500 x2503
http://www.soyogroup.com

U4EA Technologies
+441173736758
http://www.u4eatech.com

104. Softswitch

ABP Technology
972-831-1600
http://www.abptech.com
(See our enhanced listing in the alphabetical section.)

Adaptive Digital Technologies, Inc.
610-825-0182
http://adaptivedigital.com

Ascendent Systems
888-507-1777
http://www.ascendentsystems.com

Aspect Software
888-412-7728
http://www.aspect.com

Doretel Communications, Inc.
404-755-5721
http://www.doretel.com

FacetCorp
800-235-9901
http://www.facetcorp.com

Freeway Communications
213-225-2200 x101
http://freeway.com

GoHigh Data Networks Technology Co., Ltd.
+8610-62302956
http://www.datangnetwork.com
(See our enhanced listing in the alphabetical section.)

MERA Systems, Inc.
866-644-3051 x5973
http://www.mera-systems.com

Netcentrex Converged IP Communications, Comverse
+33 (0)1 58 71 33 33
http://www.netcentrex.net
(See our enhanced listing in the alphabetical section.)

NexTone Communications
240-912-1310
http://www.nextone.com

SMART NETWORK SOLUTIONS
305-808-7361
http://www.smartisvoip.com

Solegy LLC
212-801-2506
http://www.solegy.com
(See our enhanced listing in the alphabetical section.)

Sphere Communications Inc.
847-793-9600 x300
http://www.spherecom.com

Tekelec
888-628-5521
http://www.tekelec.com

TransNexus
404-526-6060
http://www.transnexus.com

VoX Communications
813-217-9777
http://www.voxcorp.net
(See our enhanced listing in the alphabetical section.)

105. Signaling Gateway

Cantata Technology
781-449-4100
http://www.cantata.com
(See our enhanced listing in the alphabetical section.)

Convergin
+972-9-951 7771
http://www.convergin.com

Doretel Communications, Inc.
404-755-5721
http://www.doretel.com

Encore Networks
703-318-4366
http://www.encorenetworks.com

IntelliNet Technologies, Inc.
321-726-0686
http://www.intellinet-tech.com

Sevis Systems
770-536-2425
http://www.sevis.com

Stratus Technologies
978-461-7000
http://stratustelecom.com

Tekelec
888-628-5521
http://www.tekelec.com

Telesis A.S.
+90 312 3840394
http://www.stillink.com

106. Enhanced Services Platform

Allot Communications
952-944-3100
http://www.allot.com
(See our enhanced listing in the alphabetical section.)

Cantata Technology
781-449-4100
http://www.cantata.com
(See our enhanced listing in the alphabetical section.)

Carrius Technologies, Inc.
214-572-7800
http://www.carriustech.com

Cognitronics
203-830-3523
http://www.cognitronics.com

Diversified Technology
800-443-2667
http://www.dtims.com

Pipeline Telecom Inc.
321-409-9971 x11
http://www.pipelinetelecom.com

Solegy LLC
212-801-2506
http://www.solegy.com
(See our enhanced listing in the alphabetical section.)

Stratus Technologies
978-461-7000
http://stratustelecom.com

107. Voice Data Multiplexers

Converged Access Inc.
978-742-1400 x404
http://www.convergedaccess.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

Convergin
+972-9-951 7771
http://www.convergin.com

110. Wireless Base Station

Alliance Systems
972-633-3400
http://www.alliancesystems.com
(See our enhanced listing in the alphabetical section.)

SMC Networks
949-679-8000
http://www.smc.com

SpectraLink
303-583-5342
http://www.spectralink.com

SERVICE PROVIDERS

111. CLEC

CommPartners
702-367-8647 x1017
http://www.commpartners.us

Level 3 Communications
877-2LE-VEL3
http://www.Level3.com

MichTel Communications, LLC
248-771-5000
http://www.michtel.com

RNK Telecom
781-613-6000
http://www.rnktel.com

The Telecom Directory
404-797-6633
http://www.TheTelecomDirectory.com

VoIP Inc.
407-389-3232
http://www.voipincorporated.com

Voxbone
+32 22 18 55 39
http://www.voxbone.com

112. Internet Fax Service Provider

gr8fone.net
919898008655
http://gr8fone.net

Pangea Communications Corp.
503-221-2121
http://www.pangea-comm.com

113. Internet Telephony Wholesaler

1SourceVoIP
800-777-8197
http://www.1SourceVoIP.com

Adaptive Digital Technologies, Inc.
610-825-0182
http://adaptivedigital.com

BandTel for Flawless VoIP
949-640-9700
http://www.bandtel.com

Bandwidth.com
919-297-1100
http://www.bandwidth.com/

Bway.net
212-982-9800
http://www.bway.net

Clearpath Communications, LLC
248-724-4444
http://www.clearpath1.com

CommPartners
702-367-8647 x1017
http://www.commpartners.us

Digerati Networks
210-614-7240
http://www.digerati-networks.com

GM Voices, Inc.
770-752-4500
http://www.gmvoices.com

gr8fone.net
919898008655
http://gr8fone.net

Level 3 Communications
877-2LE-VEL3
http://www.Level3.com

MichTel Communications, LLC
248-771-5000
http://www.michtel.com

New Global Telecom
303-278-0700
http://www.ngt.com

Nuvio
816-444-4422
http://www.nuvio.com

Pipeline Telecom Inc.
321-409-9971 x11
http://www.pipelinetelecom.com

The Telecom Directory
404-797-6633
http://www.TheTelecomDirectory.com

VoIP Inc.
407-389-3232
http://www.voipincorporated.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

114. ISP

Bandwidth.com
919-297-1100
http://www.bandwidth.com/

Bway.net
212-982-9800
http://www.bway.net

MichTel Communications, LLC
248-771-5000
http://www.michtel.com

The Telecom Directory
404-797-6633
http://www.TheTelecomDirectory.com

115. ITSP

BandTel for Flawless VoIP
949-640-9700
http://www.bandtel.com

Bway.net
212-982-9800
http://www.bway.net

Efonica
212-201-2400
http://efonica.com
(See our enhanced listing in the alphabetical section.)

Freeway Communications
213-225-2200 x101
http://freeway.com

gr8fone.net
919898008655
http://gr8fone.net

M5 Networks
646-230-5000
http://www.m5net.com

MichTel Communications, LLC
248-771-5000
http://www.michtel.com

Pandora Networks
800-805-0558
http://www.pandoranetworks.com
(See our enhanced listing in the alphabetical section.)

The Telecom Directory
404-797-6633
http://www.TheTelecomDirectory.com

116. Next-Gen Telco

BandTel for Flawless VoIP
949-640-9700
http://www.bandtel.com

Comwave Telecom Inc.
416-663-9700 x303
http://www.comwave.net

Level 3 Communications
877-2LE-VEL3
http://www.Level3.com

MichTel Communications, LLC
248-771-5000
http://www.michtel.com

VeriSign
650-961-7500
http://www.verisign.com

VoIP Inc.
407-389-3232
http://www.voipincorporated.com

Voxbone
+32 22 18 55 39
http://www.voxbone.com

117. Prepaid

VoiceStamps.com
469-272-4688 x1
http://www.voicestamps.com

WebPhone
866-320-3077
http://www.webphone.com

APPLICATION SERVICE PROVIDERS

118. Application Infrastructure Provider

BEA Systems Inc.
408-570-8701
http://www.bea.com/wlcom

Castle CRM
866-330-6470
http://www.acastle.com

gr8fone.net
919898008655
http://gr8fone.net

Motorola Embedded Communications Computing Group
602-437-3623
http://www.motorola.com/computing

Teleformix
847-472-5300
http://www.teleformix.com
(See our enhanced listing in the alphabetical section.)

Telkonet, Inc.
240-912-1800
http://www.telkonet.com

119. Independent Software Vendor

Axcis.Net Software
800-585-1696
http://www.axcis.net

BEA Systems Inc.
408-570-8701
http://www.bea.com/wlcom

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

FaxBack, Inc.
503-597-5355
http://www.faxback.com

I.S. Associates, Inc.
800-583-3440 x142
http://www.isassoc.com
(See our enhanced listing in the alphabetical section.)

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Located On Pages 94 & 95

LumenVox LLC
877-977-0707 xSales
http://www.LumenVox.com

Natural Convergence
613-280-2000
http://www.naturalconvergence.com

OPC Marketing, Inc.
972-267-3279 x202
http://www.opc-marketing.com

Pronexus Inc.
613-271-8989
http://www.pronexus.com

TMPG
310-327-9700
http://www.tmpg.com

Traxi Technologies, LLC
212-812-9450 x114
http://www.traxitech.com

120. Collaborative ASP (groupware, e-mail, video conferencing)

Siemens Communications
800-765-6123
http://www.communications.usa.siemens.com/home.html

121. Communications ASP

iotum
613-482-9099
http://iotum.com

OPC Marketing, Inc.
972-267-3279 x202
http://www.opc-marketing.com

UCN, Inc.
888-UCN-0002
http://www.ucn.net
(See our enhanced listing in the alphabetical section.)

zCONNEX GROUP
800-715-9990
http://www.zconnex.com

123. Telephony ASP

Adaptive Digital Technologies, Inc.
610-825-0182
http://adaptivedigital.com

Comwave Telecom Inc.
416-663-9700 x303
http://www.comwave.net

General Telecom
646-328-5800
http://www.gentel.net

GM Voices, Inc.
770-752-4500
http://www.gmvoices.com

iotum
613-482-9099
iotum.com

M5 Networks
646-230-5000
http://www.m5net.com

Nuvio
816-444-4422
http://www.nuvio.com

Pronexus Inc.
613-271-8989
http://www.pronexus.com

Solegy LLC
212-801-2506
http://www.solegy.com
(See our enhanced listing in the alphabetical section.)

VoiceStamps.com
469-272-4688 x1
http://www.voicestamps.com

125. Voice Portal

BCE Elix
501-768-1000
http://www.bceelix.com

GM Voices, Inc.
770-752-4500
http://www.gmvoices.com

LumenVox LLC
877-977-0707 xSales
http://www.LumenVox.com

Pronexus Inc.
613-271-8989
http://www.pronexus.com

TOUBATEL
+33172100204
http://www.toubatel.com

OTHER

127. Clearinghouse

TransNexus
404-526-6060
http://www.transnexus.com

128. Consultant

Castle CRM
866-330-6470
http://www.acastle.com

Clearpath Communications, LLC
248-724-4444
http://www.clearpath1.com

HEAD acoustics GmbH
+49-2407-5770
http://www.head-acoustics.de

High Tech High Touch Solutions, Inc.
425-398-9292
http://www.HTHTS.com

Telacquire Marketing Group Inc.
604-677-7780
http://www.telacquire.com

TeleBright
888-519-1472
http://www.telebright.com

The Telecom Directory
404-797-6633
http://www.TheTelecomDirectory.com

129. Developer

Castle CRM
866-330-6470
http://www.acastle.com

DiamondWare, Ltd.
480-380-1122
http://www.dw.com

Hermon Labs
972-4-628-8001
http://www.hermonlabs.com

High Tech High Touch Solutions, Inc.
425-398-9292
http://www.HTHTS.com

IVR USA
971-249-1322
http://www.ivrusa.com

LumenVox LLC
877-977-0707 xSales
http://www.LumenVox.com

Red Hawk/CDT
800-989-4295 x235
http://www.power-sense.com

Softel Communications Inc
877-525-1987
http://www.softel.com

Spanlink Communications
763-971-2000
http://www.spanlink.com
(See our enhanced listing in the alphabetical section.)

TELECORP PRODUCTS., INC
248-960-6642
http://www.telecorpproducts.com

TeleVoce Inc
408-627-4044
http://www.televoce.com

Traxi Technologies, LLC
212-812-9450 x114
http://www.traxitech.com

Viziqor Solutions
508-248-9896
http://www.viziqor.com

130. Distributor

Enteractive Distribution Co.
860-236-8600
http://www.enteractive.com

SMART NETWORK SOLUTIONS
305-808-7361
http://www.smartisvoip.com

Target Distributing
800-873-5528 x1120
http://www.targetd.com

131. Interconnect

Empire Communications
707-545-8300
http://www.empirecomm.com

Newport Networks Limited
+44 (0) 1291 635830
http://www.newport-networks.com

Viziqor Solutions
508-248-9896
http://www.viziqor.com

Voxbone
+32 22 18 55 39
http://www.voxbone.com

133. Reseller

Castle CRM
866-330-6470
http://www.acastle.com

Enteractive Distribution Co.
860-236-8600
http://www.enteractive.com

IVR USA
971-249-1322
http://www.ivrusa.com

Telacquire Marketing Group Inc.
604-677-7780
http://www.telacquire.com

134. Systems Integrator

Castle CRM
866-330-6470
http://www.acastle.com

Crystal Group Inc.
319-378-1636
http://www.crystalpc.com

Elma Electronic
510-490-7388 x516
http://www.elma.com
(See our enhanced listing in the alphabetical section.)

Freeway Communications
213-225-2200 x101
http://freeway.com

Givex Corporation
877-478-7733
http://www.givex.com

High Tech High Touch Solutions, Inc.
425-398-9292
http://www.HTHTS.com

Incognito Software
604-688-4332 x860
http://www.incognito.com

International Systems Research Co.
650-570-6960
http://www.isrus.com

IVR USA
971-249-1322
http://www.ivrusa.com

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

Spanlink Communications
763-971-2000
http://www.spanlink.com
(See our enhanced listing in the alphabetical section.)

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Located On Pages 94 & 95

OTHER

Acoustic Magic
978-440-9384
http://www.AcousticMagic.com
Microphones

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

AnswerNet Network
800-411-5777
http://www.answernet.com
E-mail Management, Live Chat, Web Order Entry, Online Appointment Scheduling

Axcis.Net Software
800-585-1696
http://www.axcis.net
Field Service Management Software

BCE Elix
501-768-1000
http://www.bceelix.com
Contact center solutions

BorderWare Technologies Inc.
905-804-1855 x245
http://www.borderware.com
VoIP Firewall

Bway.net
212-982-9800
http://www.bway.net
Hosted PBX

CapRock Communications
832-668-2300
http://www.caprock.com
satellite communications

Carrius Technologies, Inc.
214-572-7800
http://www.carriustech.com
Network Layer Service Delivery Platform

Catalog Retail Marketing Int'l, Inc. (CRMI)
802-334-1000 x203
http://www.crmi.cc
CRMI provides inbound call center services (Voice/web/e-mail)

Centillium Communications, Inc.
510-771-3700
http://www.centillium.com
VoIP System-On-Chip

Cicero Networks
+353 1 6636510
http://www.ciceronetworks.com
wVOIP Solutions

Cognitronics
203-830-3523
http://www.cognitronics.com
Media Servers

CommPartners
702-367-8647 x1017
http://www.commpartners.us
IP-Based Wholesale Solutions

Convergin
+972-9-951 7771
http://www.convergin.com
wireless convergence server, SCIM

CosmoCom, Inc.
631-940-4200
http://www.cosmocom.com
Unified Customer Communications IP Contact Center

Crystal Group Inc.
319-378-1636
http://www.crystalpc.com
IP Telephony Developer Platform

DiamondWare, Ltd.
480-380-1122
http://www.dw.com
Converged Enterprise Communications Solution, Low Latency Windows/PDA Softphone

Digium, Inc.
256-428-6000
http://www.digium.com
Asterisk, the Open Source PBX

Doretel Communications, Inc.
404-755-5721
http://www.doretel.com
Cisco Registered Partner, Quintum VoIP Products

Echo by BenchmarkPortal
805-614-0123 x62
http://www.echoinformation.com
After Call Customer Satisfaction Solution

ENGATE Technology Corporation
408-494-8310
http://www.engate.com
connection management, reputation based security, protocol level security

Envision
206-225-0800 x500
http://www.envisioninc.com
Business Intelligence, Quality Monitoring, Workforce Management and eLearning

Forum Communications International
972-680-0700 x1581
http://www.forum-com.com
Emergency Response/Collaboration

General Telecom
646-328-5800
http://www.gentel.net
Full-Service TDM And IP Network Management Solutions Provider

Givex Corporation
877-478-7733
http://www.givex.com
Gift Cards, Loyalty Cards, Stored Value, Coupons, Payment Systems

GM Voices, Inc.
770-752-4500
http://www.gmvoices.com
Voice Branding, Speech Recognition, International Telephony, Corporate Storytelling

GoHigh Data Networks Technology Co., Ltd.
+8610-62302956
http://www.datangnetwork.com
ATA
(See our enhanced listing in the alphabetical section.)

High Tech High Touch Solutions, Inc.
425-398-9292
http://www.HTHTS.com
Help Desk & Call Center Conferences and Services (HD Prof. & Gov. Customer Sprt.

HigherGround, Inc.
818-591-3133 x249
http://www.highergroundinc.com
Call Recording Solution

Ingate Systems
603-883-6569
http://www.ingate.com
SIP Firewalls and SIParators, NAT traversal, remote connectivity, SIP Trunking

Intrado
877-856-7504
http://www.intrado.com
E9-1-1 Solutions

MERA Systems, Inc.
866-644-3051 x5973
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

Microtronix Systems Ltd
519-649-4900
http://microtronix.ca
TIA810-A/B, TIA920

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 carrier-class VoIP processing solutions

Minerva Networks
408-567-9400
http://www.minervanetworks.com
IPTV Services

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

Netcentrex Converged IP Communications, Comverse
+33 (0)1 58 71 33 33
http://www.netcentrex.net
Triple/Quad Play
(See our enhanced listing in the alphabetical section.)

NetScout Systems
888-999-5946
http://www.netscout.com
Application Performance Management

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

On2 Technologies, Inc.
518-724-3872
http://on2.com
Video for VoIP

Pronexus Inc.
613-271-8989
http://www.pronexus.com
IVR development tools

Quintum Technologies, Inc.
732-460-9000 x238
http://www.quintum.com
Session Border Controllers, Call Routing Servers

Red Hawk/CDT
800-989-4295 x235
http://www.power-sense.com
Power over Ethernet Hubs

Rhino Equipment Corp.
480-940-1826 x6311
http://www.rhinoequipment.com
Channelbanks

RNK Telecom
781-613-6000
http://www.rnktel.com
VoIP Wholesaler

SES AMERICOM
609-987-4555
Satellite Communications

Sevis Systems
770-536-2425
http://www.sevis.com
Fraud Solution

Shenzhen Koncept Technology Development Co.,Ltd
(86)755 82197307 x823
http://www.konceptusa.com
VOIP

SMART NETWORK SOLUTIONS
305-808-7361
http://www.smartisvoip.com
Integration of projects in IP communications

snom technology AG
++49-(0)30-39833 x113
http://www.snom.com
Manufacturer SIP VoIP Phones
(See our enhanced listing in the alphabetical section.)

Sphere Communications Inc.
847-793-9600 x300
http://www.spherecom.com
IP PBX & Unified Communications

SysMaster Corporation
877-900-3993
http://www.sysmaster.com
VoIP, IPTV, WiFi Solutions

Telanetix
858-362-2250
http://www.telanetix.com
Telepresence

Telco Systems, a BATM Company
800-221-2849 x2250
http://www.telco.com
VoIP Gateway,VoIP IAD, VDSL, IP/Ethernet Switches / Demarc, TDM, Fiber Transport

TelStrat
972-543-3500
http://www.TelStrat.com
VoIP Call Recording/Logging

TiVi
+371 7881005
http://www.tivi.com
VoIP on smartphones (Symbian and Windows Mobile) over 3G, EV-DO, GPRS and WiFi

TMONE
877-868-2586
http://www.TMone.com
Customer Acquisition, Lead Generation, Lists Services, & Project Managment

Toshiba America Information Systems, Telecom Systems Div.
949-583-3700
http://www.telecom.toshiba.com
Wireless IP Phones, FeatureFlex, digital phones, softphones, Client Software
(See our enhanced listing in the alphabetical section.)

TransNexus
404-526-6060
http://www.transnexus.com
GKTMP Route Server

Traxi Technologies, LLC
212-812-9450 x114
http://www.traxitech.com
Call Recording/CRM Integration

Trenton Technology, Inc.
770-287-3100
http://www.TrentonTechnology.com
Backplanes, Single Board Computers, CompactPCI

TriVium Systems, Inc
877-439-9338 x320
http://www.triviumsys.com
Call Accounting, Call Recording & Traffic Analysis

Viziqor Solutions
508-248-9896
http://www.viziqor.com
Revenue Assurance

VoiceStamps.com
469-272-4688 x1
http://www.voicestamps.com
Call Recording, Verbal Contracts, TPV, Pay by Phone

VoX Communications
813-217-9777
http://www.voxcorp.net
Residential and Business VoIP
(See our enhanced listing in the alphabetical section.)

Voxbone
+32 22 18 55 39
http://www.voxbone.com
Origination Services

WildPackets
925-937-3200
http://www.wildpackets.com
Distributed Network Analysis Solutions

Xelor Software
603-327-0400
http://www.xelorsoftware.com
VoIP QoS Software

Zoom Technologies, Inc.
617-535-9383
http://www.zoom.com
Analog Telephone Adapters

To receive free information from our premium advertisers, please visit freeinfo.tmcnet.com

VoIP MARKETPLACE

ADVERTISING INDEX

By Greg Galitzine

VoIP Goes Viral

As I mentioned in a recent entry on my TMCnet.com blog, I'm a huge fan of mainstream televised commercials for VoIP services and triple play bundles, and so on. The reasons are fairly obvious, in that it's an industry that I've been following for close to a decade now, and there's a certain sense of satisfaction knowing that a product category that was derided as a hobbyist's plaything is now regarded as a major industry-changing force.

I should admit that I'm sort of a 'commercial junkie' who watches the Super Bowl as much for the ads as the game, and used to relish those Dick Clark specials featuring international commercials. One of my all-time favorites — and one of the most popular commercials — featured a group of small children sitting together in a tub, until a stream of bubbles percolates to the top, resulting in a group of small children sitting in a tub as far apart as possible from a single child who, well, you know the commercial I'm talking about.

These days, if you want to see an international commercial, or perhaps even an international *VoIP* commercial, you need simply surf on over to YouTube, where a search yields some interesting results. For example, I was not aware that Australian companies had cornered the market on VoIP commercials, as evidenced by creative content from Koala Broadband and a company called Engin. Brazil returned a huge number of results too, although apparently VoIP in Sao Paolo can cost as much as $49.95 U.S. . . . kind of defeats the purpose, no? Then again, I do hear that the lucky Brazilians have access to up to 8 MB/s of broadband, so maybe the price reflects that as well. Or maybe it's to offset the cost of hiring all those beautiful people to star in their commercials?

The purpose of this article however, is not to espouse my affection for the advertising industry's efforts, but rather to point to the fact that VoIP (define - news - alert) service providers are beginning to ply their trade within the booming online viral video market, best represented by YouTube.

So, it seems that even the world's best marketers, armed with a service built upon a major cost advantage, are reaching out for tools such as YouTube and other online viral marketing techniques. And there's absolutely nothing wrong with it.

One company that might be on the verge of engaging in a little viral marketing is CommuniGate Systems. The company is about to release a version of its CommuniGate Pro product that has been scaled down to serve up to five users. The CGP Community Edition is designed for small companies and home users, however it will offer all the benefits that larger enterprises have come to expect: a full email server, SIP and Presence Server, IM Server, voice mail, PBX, and conferencing server. . . do you see where this is going?

Any person can install this on their home computer, with a domain of their choosing, and become SIP enabled with access to their IP Communications anywhere in the world. That means a small company, or home user can flip open their laptop and connect to a WiFi network at the airport, read email, IM, and receive phone calls, all with their one SIP-based email address.

Small business users will have a wide choice of clients (SIP phones, soft clients, IM clients, browsers, etc.) and they will be able to send and receive all IP Communications via a single account, which is identified by their email address. Communications will be open to every other SIP-based application, and will remain vendor agnostic.

The Community Edition will ship with a Flash-based user interface that can do email, IM, and audio calls, a softphone, and will offer out-of-the-package compatibility with many SIP phones, like Polycom, Linksys, and others.

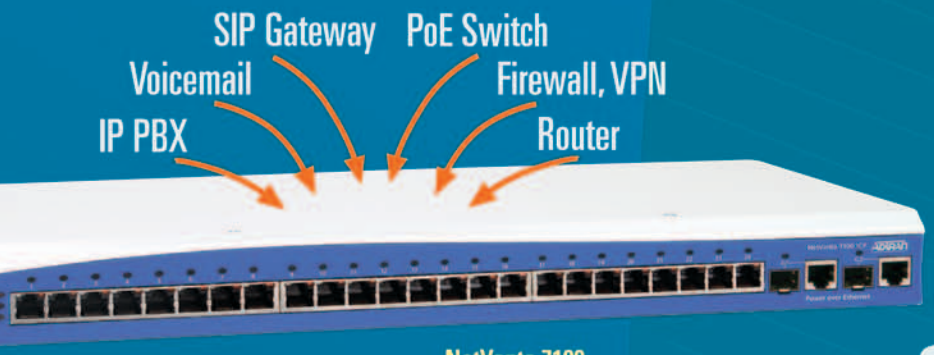
CommuniGate Pro might eventually be deployed via the home entertainment environment on devices such as cable and DSL modems as these devices begin to empower the home or family domain for all IP Communications.

I'm not usually that gung-ho over individual products, but every once in a while I see something that looks like it might be a winner out of the gate. This might be one of those times. I'd still like to download the product and put it to the test in my home environment, so I will reserve final judgment, but I have to admit, I came away from a recent meeting — indeed several conversations spread across six months — with CommuniGate execs with a very positive feeling.

Every once in a while I see something that looks like it might be a winner out of the gate. This might be one of those times.

Getting back to the whole viral marketing point, CommuniGate is offering this software as a free download for a limit of five users. The free download is available now, but starting at the end of November, CommuniGate will begin a major effort promoting this solution. So surf on over to CommuniGate's site (http://www.communigate.com) and check out CGP Community Edition. IT

Greg Galitzine is Group Editorial Director for TMC's IP Communications Group.



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High costs for communications are now a thing of the past. With ADTRAN, you can easily lower your total cost of ownership. Every NetVanta includes ADTRAN's ***100% satisfaction guarantee***, backed by ***industry-leading technical support*** (before and after the sale), ***free firmware upgrades***, and a full ***5-year warranty***.

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  - — Fax Management
  - — Findme Followme
  - — Call Records
  - — Auto Attendant
- Instant Subscriber Activation

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- **TERMINATION** (Domestic & International)
- **ENHANCED 411** (Directory Assistance)
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- **CALLER IDENTIFICATION** (Caller ID with Name CNAM)
- **DIRECTORY LISTINGS**

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