



IPCC

International Packet Communications Consortium

IPCC NEWSLETTER

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MESSAGE FROM THE CHAIRMAN



INSIDE THIS ISSUE:

Educational Note on SBCs	2
SP Deployment News	3
Regulatory & Legislative Update	7
Market Research Corner	8
IPCC at Supercomm	9

Dear IPCC Members,

Since the publication of our last newsletter the IPCC participated in the National Show sponsored by the National Cable Telecommunications Association (NCTA) with a live demo of VoCable service. Our participation at this show was an unqualified success. VoIP and packet technology was a major focus of this show. We met with senior executives from cable companies and vendors and the message was clear that in 2004 MSOs have serious plans to roll-out packet voice services, to build out their packet voice networks and to partner with carriers and solutions providers. This spells tremendous opportunities for vendors and carriers in this market.

The IPCC's demo showed cable companies how they can create new custom services, integrate their operations support systems (OSSs) and provide web-based interfaces for their subscribers. Attendees tested the quality of service by making calls from the booth. Attendees at the show were able to make free calls to check the quality of the service for themselves. We would like to thank the IPCC member and Service Provider Group companies that assisted us with the NCTA demo: Cisco, Motorola, Sonus, Trendium, Convedia, MCI, Volo Communications, Level 3 and CommuniTech. A picture of our NCTA demo is shown at left. We held a series of ten successful meetings with members of the media ranging from the Wall Street Journal to key cable trade publications such as, Broadcasting & Cable, Cable World and Cable Data News.

Please give immediate attention to the last two pages of this newsletter. It contains important information on IPCC member participation and member discounts at Supercomm 2004. At Supercomm will again demonstrate the capabilities of our members to deliver mature, interoperable, VoIP solutions. IPCC members will have the opportunity to participate in Pulver.com's SIPop! Event at member rates. IPCC members have also been invited to attend an Evening Boat Cruise at Supercomm sponsored by TMC and CommuniTech on June 22, 2004. RSVP required. We are also very excited about the IPCC's participation in the upcoming CompTel Show in September and we will provide more details on that in future newsletters. We look forward to seeing you at Supercomm 2004!

Regards,

Michael Khalilian
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+1-321-230-3070

EDUCATIONAL NOTE: Delivering Interactive Communications Across IP Network Borders

The dream of generating revenue from interactive communications -- real-time, high quality voice and video communications between people -- is fast becoming a reality. Interactive communications over IP networks has opened up a plethora of business opportunities including: transport only services; hosted IP interactive communications services such as VoIP; and many new services not possible in the PSTN, such as, presence with instant calling, distance learning with real-time Q&A capabilities, etc..



Regardless of the opportunity, interactive communication over IP networks must be able to reach anyone, anywhere, anytime to maximize its value. To paraphrase Metcalfe's Law: *the usefulness, or utility, of interactive communication equals the square of the number of users*. New interactive communication services and applications, therefore, must ultimately span business and consumer, wired and wireless networks. Consequently, simply building standalone voice, video and multimedia over IP network islands is not enough. They must be built and interconnected in a way that ensures security and peak performance end-to-end. Businesses and consumers will be satisfied with—and pay good money for—nothing less.

The New Needs at the Edge

Connecting even just two IP networks, such as an enterprise and a provider's network, introduces new network edge requirements in three major areas – security, service assurance and law enforcement. Since these requirements cannot be satisfied by existing products, they have spawned a new product category called session border controllers (SBC). SBCs sit at the edge of the provider's network and complement existing routers. They perform required control functions by tightly integrating session signaling and media control.

Security

The security agenda is driven by the fact that in today's world no one trusts anyone else - especially their IP network. Firewalls and NAT devices protect all business networks, major web sites, and increasingly, residential PCs and networks. They only allow delivery of information explicitly requested. No one can send information directly to you. This model minimizes the mess resulting from the explosion in viruses, worms and SPAM, which have destroyed systems and crippled the Internet. Similarly, a service provider must allow authorized users into its network, while protecting internal service infrastructure (softswitches, SIP proxies, application and media servers, etc.) from service provider DoS attacks, as well as concealing valuable route information from customers and competitors. Security functions such as access control (pinhole firewalls), topology hiding at both layer 3 and layer 5 (on both the signaling and the media packets), DoS protection, session privacy, route stripping and many others must be performed at wirespeed in order to minimize the impact of any attacks on the SBC itself and the end-to-end call set-up and media stream latency.

Service Assurance: SLA Assurance and Revenue & Profit Assurance

SLA assurance is concerned with guaranteeing session capacity and quality for customers. The biggest SLA assurance challenge today entails converging premium revenue-generating voice, video and multimedia with data traffic on constrained and oversubscribed access links (T1, DSL, etc) connecting service providers with enterprise or residential customers. *When it comes to quality in the IP network, with data, it's better late than never and with voice, it's better lost than late.*

Session admission control is the only way to guarantee SLAs for interactive communications over skinny pipes. By controlling the number of real-time sessions allowed through network choke points and ensuring their priority, SBCs

provide the tools required by service providers to guarantee both call capacity and quality end-to-end. Granular and real-time QoS marking and reporting is also necessary for assuring and reporting on SLAs, and for problem alerting and isolation (i.e. SBCs must be able to measure end-to-end jitter, latency and packet loss, as well as on a segment-by-segment basis to determine the quality within a specific network). Revenue and profit assurance is focused on maximizing revenues and minimizing costs. This is where service theft protection, session routing for optimizing route selection, increasing softswitch scalability and call detail record (CDR) accounting with session timers are critical.

Multiprotocol support with interworking is another function performed by some SBCs, maximizing network reach and revenues while minimizing costs. By supporting SIP-H.323 interworking, for example, a provider can build one SIP service backbone yet support both SIP and H.323 customers and/or visa versa.

Law enforcement

IP networks must also be able to support lawful intercept capabilities, such as the US Communications Assistance for Law Enforcement Act (CALEA). CALEA demands that it must be possible to replicate and route target calls, including both signaling messages and media streams, to multiple law enforcement agencies simultaneously and transparently.

Net-Net: Session border controllers

Session border controllers are an attractive and wise investment for delivering revenue-generating interactive communications across IP network borders securely with premium performance.

This article was contributed by Jim Hourihan, Vice President Marketing & Product Management at IPCC member company, Acme Packet <http://www.acmepacket.com>

SERVICE PROVIDER DEPLOYMENT NEWS

Global Crossing Reaches New Milestones with Help from Sonus



Global Crossing more than doubled the traffic transmitted on its VoIP network between January 2003 and March 2004, growing from 1.16 billion minutes per month to 2.4 billion minutes per month. At the same time, Global Crossing boosted the availability of its network, recording 99.999 percent uptime for 2003 and year-to-date 2004.

Global Crossing began offering carrier-class VoIP network in September 2000. Global Crossing's network encompasses 27 VoIP gateway centers in 10 countries throughout North America, Europe, and Latin America, providing connectivity to enterprise and carrier customers worldwide. Global Crossing has built its network on Sonus' Open Services Architecture(TM) (OSA) and VoIP infrastructure solutions, including the GSX9000(TM) Open Services Switch, the Insignus(TM) Softswitch and the Sonus Insight(TM) Management System. Global Crossing expects to transmit more than 40 percent of its voice traffic over its VoIP network by the end of 2004.

<http://www.globalcrossing.com>

MCI Extends its Hosted VOIP Service over DSL

MCI is expanding the availability of its hosted VoIP services to include access via MCI's facilities-based DSL service, which covers markets serving many of the top US metropolitan service areas (MSAs) including Los Angeles, Boston and Chicago. Later this year, MCI will more than double its Advantage DSL coverage to reach more than four million businesses via an existing agreement with Covad. To ensure business quality VoIP, MCI manages both inbound and outbound voice prioritization and data packet fragmentation for DSL.

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MCI is also enhancing the hosted VoIP through its recently announced relationship with BroadSoft. This will enable new capabilities, such as Outlook integration, call screening, click-to-talk capabilities, simultaneous ring, auto attendant and Web-based receptionist services. MCI Advantage customers also will be able to leverage a remote offices service which provides "road warriors" and teleworkers with the same network access and functionality on-the-go that are standard in a typical office setting.

The service will allow customers to distinguish personal calls from business calls and eliminate the need for employees to log and submit business expenses for reimbursement. MCI completed trials of the BroadSoft solution last month and will offer a commercial solution to customers in June 2004.



New York Rules Vonage is a Phone Company



New York's Public Service Commission ruled that Vonage is a telephone corporation as defined by state law and therefore must obtain a certificate of Public Convenience and Necessity. The New York state commission said it does not seek to interfere with the rapid deployment of new technologies, but "must ensure that its core public interest concerns, including public safety and network reliability, are met." The state commission holds that Vonage must be subject to the same "limited" regulatory regime which is applied to competitive carriers in New York. Specifically, the commission said Vonage is not subject to economic or rate regulation, but must obtain authorization to provide telephone service and must file a schedule of its rates. <http://www.dps.state.ny.us/>

www.vonage.com

Level 3 Expands Availability of Wholesale & Residential VoIP



Level 3 Communications will expand the availability of its (3)VoIP Local Inbound service 73 U.S. markets to more than 300 U.S. markets by the end of June. The service significantly reduces communications costs for foreign carriers, call center operators, conferencing providers, and other service providers that require a reliable and geographically expansive local calling infrastructure. The service complements Level 3's world-

wide (3)Voice Termination service and (3)VoIP Toll Free the company's toll-free, nationwide calling solution.

Level 3 Communications has completed the first stage of a phased roll-out of its wholesale residential VoIP service, which is now available in 50 markets across the U.S. The company plans to extend the service to 300 U.S. markets this year.

<http://www.Level3.com>

Please Note our New Address:

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Phone: +1 510-744-4020

Fax: 510.608.5917

www.packetcomm.org



UTStarcom signs Chunghwa

UTStarcom announced a new contract valued at approximately \$21.5 million with Chunghwa Telecom, the incumbent carrier in Taiwan. Chunghwa will employ UTStarcom's NetRing multi-service optical transport products, which were announced in Q4 2003, to deliver high-density, high-speed broadband services, including voice, data, and video, to subscribers throughout Taiwan.

Under the terms of the contract, UTStarcom will provide the optical equipment and Siemens will handle installation, maintenance, and third-party services.
<http://www.utstar.com>

Cisco & Ericsson Team to Help Incumbents replace Class 4 & 5 Switches

Cisco Systems Inc. has teamed up with LM Ericsson in a partnership aimed at incumbent carriers, chasing the Class 4 and Class 5 replacement markets and broadband services. Rather than develop new products, the companies will work as

systems integrators, each providing pieces of a single offering to carriers. www.cisco.com

China Mobile Picks Huawei Softswitch

China Mobile selected Huawei's advanced gsm soft-switch MSC to build its TMSC plane network, which will cover the network of China mobile in 31 branches to save long-distance call transmission resources via IP transmission. It will also support China Mobile's '17951' VoIP services.
www.chinamobile.com

BT Teams with Vodafone for Fixed/Mobile Links

BT and Vodafone UK announced a partnership to offer fully-converged fixed-mobile services. The link-up with Vodafone UK reinforces and builds upon BT's presence in the business and consumer mobile markets by extending the benefits currently available to BT's mobility customers.



The deal enables Vodafone UK to maximize its network and service assets while generating additional revenue from a new source. BT customers would benefit from true fixed-mobile convergence by not having to carry multiple devices, look up mobile address lists on different phones, or use more than one voicebank or phone number. The company said its goal is to generate around £1 billion of annual mobility and convergence revenues in five years.

<http://www.btplc.com>

PointOne Debuts Wholesale Residential



PointOne has been conducting service trials since October. Since September 2000, PointOne has built out an advanced converged voice and data network that covers 75% of the U.S. population.

PointOne is launching new VoIP services for the residential and SOHO (small office/home office markets) markets. PointOne will make the StarPoint IP™ service immediately available to cable operators throughout the U.S.

The residential broadband service provides long distance and local voice, including e911, directory assistance and other hosted services. The VoIP service for small enterprises includes abbreviated dialing, call hunt, reservationless conferencing – multiway, auto attendant, and free fax line.

www.point-one.com



Qwest to Eliminate Access Charges on True VoIP Calls

Qwest Communications is adopting a new policy that makes all "true VoIP traffic" terminating on the public switched telephone network (PSTN) free from access charges. Additionally, Qwest also plans to begin offering local services to VoIP providers, including primary rate interface ISDN circuits (ISDN-PRI). ISDN-PRI is a local exchange service that uses "enhanced T-1" facilities and allows VoIP providers to serve multiple channels within a single broadband connection. Qwest said this would enable VoIP providers to have direct access to the PSTN and avoid historically regulated fees, such as access charges.

Qwest's definition of "true VoIP" includes only enhanced services, as defined by the FCC, and does not include standard telephony services that use IP simply as a transmission medium between switches. www.qwest.com

US LEC Rolls Out VoIP with Cisco, Broadsoft

US LEC has deployed Internet gateways in Tampa and Jacksonville, Florida in the first stage of nationwide rollout of VoIP services. US LEC is utilizing its existing network infrastructure to support the VoIP service offering and a partnered with Cisco Systems in the deployment of its gateways and Internet Access Devices (IADs). US LEC is also teaming with BroadSoft in the deployment of the BroadWorks platform to provide a comprehensive range of applications. <http://www.uslec.com/>

Net2Phone Unveils Wi-Fi Telephony Strategy

Net2Phone plans to deliver a suite of wireless VoIP solutions to service providers globally, enabling them to empower residential and corporate users worldwide with mobile VoIP applications. Building on its recently announced VoiceLine broadband telephony offering, Net2Phone's wireless VoIP solutions will offer service providers SIP-based hosted wireless telephony services that can be sold to their customers as an enhancement to their existing product set. www.net2phone.com



Datang Selects Ubiquity for VoIP Applications

Datang GoHigh Data Networks Technology Co., Ltd announced that it has purchased Ubiquity's SIP Application Server to create a suite of SIP-based VoIP communications applications aimed at service providers and enterprises. Datang Group's communications software division, Datang GoHigh Data Networks Technology, is responsible for developing turnkey application solutions for service provider and enterprise customers. Using Ubiquity's standards-based, programmable Service Creation Environment (SCE), GoHigh is initially creating a SIP-based prepaid calling application for carriers both in China and internationally, followed by conferencing, unified messaging and a host of other new IP-based services. <http://www.gohigh.com.cn/> ; www.ubiquity.net

Cox Implements VeriSign for VoIP CALEA Compliance

Cox Communications has implemented



VeriSign's NetDiscovery Service to help ensure compliance of its VoIP-based cable telephony services with the Communications Assistance for Law Enforcement Act (CALEA). CALEA requires carriers to assist Law Enforcement Agencies (LEAs) in lawfully authorized surveillance. To comply, carriers often have to purchase dedicated hardware, have trained operation staff and are called upon to maintain connectivity with a variety of LEAs. In addition to the VoIP service in Roanoke, Cox also provides circuit-switched based cable telephony in 11 other U.S. markets, all of which have been CALEA-compliant since

service began in 1997. www.cox.com
<http://www.verisign.com>.

Alcatel Delivers IP Service Router for New Telia Sonera Network

Alcatel announced that TeliaSonera, the leading incumbent communications service provider in the Nordic and Baltic regions, will build its next generation metropolitan networks based on the Alcatel service routing solution. www.alcatel.com

Net2Phone Teams With Level 3 to Expand Cable VoIP Offerings Net2Phone and Level 3 will offer end-to-end telephony solutions to cable operators. Net2Phone will use Level 3's new (3)VoIP Enhanced(SM) Local residential phone service as an enhancement

to its current cable telephony solutions. Net2Phone has offered retail VoIP for 9 years to more than 500,000 users.

Level 3 Announces VoIP Technology Alliance Program

Level 3 announced a new VoIP technology alliance program designed to help call centers, conferencing companies and other customers quickly and easily bring the benefits of VoIP into their business operations and services. Among the members of the Interoperability Program to Help Customers Adopt VoIP Quickly and Easily are Avaya, Lucent Technologies and Acme Packet. (3)VoIP TAP equipment interoperability enables Level 3 and top IP hardware vendors to help mutual customers bring VoIP services to market in a turnkey and expeditious manner.

Telenet Selects Nortel Networks for Voice Over Cable

Belgian cable operator, Telenet, selected Nortel Networks to provide a cable voice over Internet Protocol (IP) telephony network - based on the PacketCable standard - that will help Telenet to drive reduced operating costs while providing a platform capable of delivering advanced IP services to businesses and consumers in Belgium.

Telenet's PacketCable VoIP solution is built on its DOCSIS 2.0.

www.telenet.be

BellSouth Launches Centrex IP Service

BellSouth launched a new Centrex IP Service for business customers across the southeastern markets. Customers will be able to access enhanced call management features.

www.bellsouth.com

Volo Communications Deploys Sonus Packet Voice Solutions

Volo has added Sonus Networks solutions to enhance its existing MPLS IP backbone network-based solutions offered to carriers, SPs and MSOs. Volo added Sonus' Open Services Architecture (OSA) featuring the GSX9000. www.caerus.net

Regulatory and Legislative Update



- FCC Initiates Rulemaking Examining Regulatory Framework for the Provision of IP-Enabled Services.** In March 2004, the FCC released a Notice of Proposed Rulemaking (Notice or NPRM) seeking comment on the appropriate regulatory structure for the provision of "IP-enabled services." The Notice begins a lengthy rulemaking process made significantly more complicated by the fact that the NPRM is broad ranging, has no tentative conclusions, and covers not just the delivery of voice services, but all "services and applications making use of Internet Protocol." The FCC seeks comment on issues such as the appropriate regulatory classification of IP-enabled services, Commission jurisdiction to regulate (or forbear from regulating), and specific regulatory rights and obligations resulting that should be afforded providers of IP-enabled services. Some of the rights and obligations that the FCC explores include: public safety and disability access; carrier-to-carrier compensation; universal service; and consumer protection. CALEA compliance for IP-enabled providers is covered by a separate rulemaking. *Comments were due on May 28, 2004; Replies are due June 28, 2004.*
- FCC Finds that Access Charges Apply to AT&T Phone-to-Phone VoIP Services.** On April 21, 2004, the FCC released an Order finding that under the Commission's current rules, AT&T's phone-to-phone IP telephony services are telecommunications services subject to interstate access charges. The FCC limited its decision to the type of service described by AT&T in its request for declaratory ruling. The critical characteristics of AT&T's service are, the call is an interexchange call that: (1) "uses ordinary customer premises equipment (CPE) with no enhanced functionality; (2) originates and terminates on the public switched telephone network (PSTN); and (3) undergoes no net protocol conversion and provides no enhanced functionality to end user's due to the provider's use of IP technology." The Commission noted that although it is ruling to eliminate the current controversy on the applicability of access charges to AT&T's specific service, it is not precluded from taking a different approach in the context of the IP-enabled services NPRM. Finally, the Commission refused to make any determination regarding the retroactive application of access charges to AT&T. Instead, it will make any such determinations on a case-by-case basis.
- United States Congress Introduces Legislation to Protect Unregulated Nature of Voice over IP Services.** In early April 2004, Senator John Sununu (R-New Hampshire) and Representative Chip Pickering (R-Mississippi) each introduced nearly identical bills in the United States Senate and House of Representatives, respectively, that have the effect of limiting regulation of IP-enabled voice services. The bills prohibit state or federal regulation of VoIP services -- with the exception of appropriate inter-carrier compensation, universal service funding, and law enforcement access. The bills also provide for a voluntary compliance process to achieve various social obligations such as access to emergency services, disability access, and infrastructure security. Both bills were immediately referred to the appropriate Committee for further consideration.

This monthly column is contributed by Staci Pies, Vice President, Governmental & Regulatory Affairs, PointOne. If you have questions on this column you can email Staci at: spies@pointone.com.

MARKET RESEARCH CORNER:

SIP Hosted Services: A Heavy Reading Competitive Analysis



This report identifies and evaluates the ways in which SIP can generate new revenue streams for service providers from their corporate customers over the next few years. The report focuses on these four key revenue-generating applications:

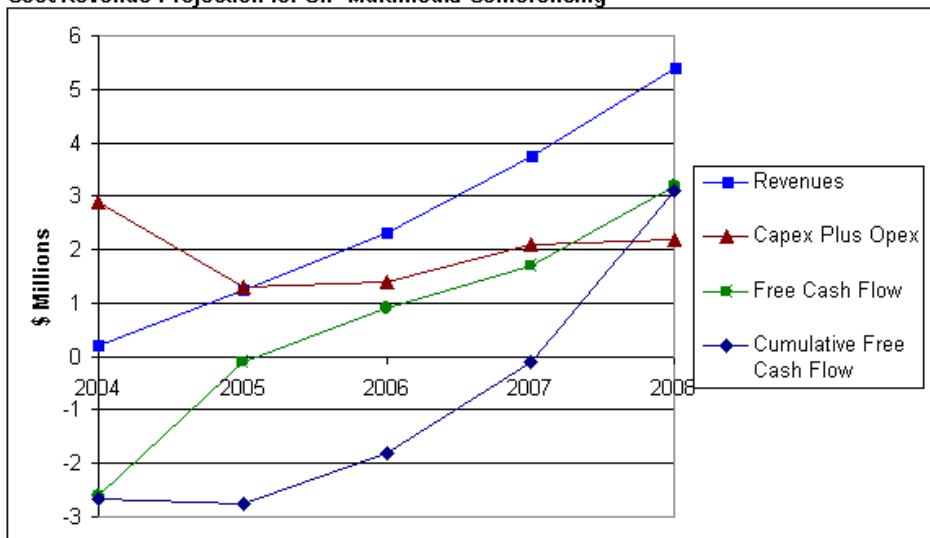
- SIP Centrex
- SIP contact centers
- SIP unified messaging
- SIP multimedia conferencing

The report includes a series of detailed product matrices covering all known carrier-grade SIP platforms now on the market. The report catalogs and compares 78 products from 47 different vendors, including 14 public companies and 33 private companies. A figure showing their estimates of Cost/Revenue Projection for SIP Multimedia Conferencing is provided below.

Key Findings

- SIP will be the basis for a new, scaleable, flexible communications network.
- Although many aspects of SIP are fully developed and in commercial deployment now, work on SIP within the IETF probably will not be completed until the end of this decade.
- Hosted contact centers are now the most attractive SIP application for service providers. The Heavy Reading's ROI analysis indicates that SIP-based hosted contact centers will deliver the fastest payback and highest rate of return among the four key applications evaluated, suggesting positive cash flow within the first year of deploying SIP-based hosted contact centers.
- Dozens of vendors now offer SIP-based or SIP-supported platforms, but relatively few of those platforms are truly carrier-grade.
- Although many incumbent vendors offer SIP platforms, they do not see SIP development as a high priority at present. Vendors including Cisco Systems and Nortel Networks now offer SIP-enabled platforms, but those platforms are based on other communications protocols, with SIP compatibility "bolted on."
- SIP specialist vendors are capturing some important customer wins at this early stage of the deployment cycle. Recent customer wins by White Pajama's platform and Polypix indicate that vendors specializing in SIP can have success selling against incumbent telecom equipment vendors in this market.

Cost/Revenue Projection for SIP Multimedia Conferencing



Source: Heavy Reading

- Makers of softswitches are incorporating SIP into their products, but it's unclear whether these implementations can deliver on all of the potential benefits of SIP. Incumbent vendors are adding SIP support to their softswitches, but those softswitches are still positioned primarily as replacements for public network circuit switches. Full SIP implementations will likely require a full transition to IP-based architectures. For additional information on this report contact Heavy Reading at: www.heavyreading.com

OPPORTUNITIES FOR IPCC MEMBERS TO PARTICIPATE IN SUPERCOMM 2004

June 22 - 24 in Chicago

1.0 Invitation to Participate in IPCC's Live VoIP Demo & Marketing Display



The IPCC will have a 10x10 booth, Booth #14149, at Supercomm (www.supercomm2004) where we will be hosting a live VoIP demonstration. Marketing material from member companies will be displayed in the booth on a literature display rack. The demonstration area has space for VoIP terminal devices and a plasma display for demonstrating software features associated with converged packet services. A picture of our NCTA demo is shown below. A similar one is planned for Supercomm.

- If you would like to participate in the live demo demonstrating interoperability with your products and services, please contact Manuel Vexler at your earliest convenience at the number provided below.
- If you would like to display your company literature at the IPCC booth at Supercomm, please send us between 100-200 copies of your marketing literature. If your shipment is exceeding 500 pages, please contact Debbie directly. The deadline for receiving your marketing material is June 14.

Please ship these materials to:

IPCC Headquarters
Att: Debbie Hetland
39355 California Street, Suite 307, Fremont, CA 94538

Contact information:

Manuel Vexler (512) 347-8886 email: mvexler@packetcomm.org
Debbie Hetland (510) 608-5907 email: dhetland@packetcomm.org

2.0 Special IPCC Member Opportunity to Participate in Pulver's SIPop! Event at Supercomm

If you are interested in participating in the Pulver.com SIPop! event at Supercomm 2004 (June 22-24), the IPCC can help you do so while saving you some of the expense of participating. Based on our partnership with the SIPop! the IPCC is able to offer a 20% discount to our member companies, based on enlisting five or more member companies. The event offers the opportunity to your marketing group to demonstrate multiple vendors' products interoperating with SIP in a live setting. If you are interested in taking advantage of this opportunity, please contact IPCC Program Manager, Debbie Hetland (510) 608-5907; email: dhetland@packetcomm.org. More details about the available event are at <http://pulver.com/sipop/about.html>.

3.0 IPCC Chairs Industry Update Session at Supercomm

Michael Khalilian will be Chairing the following Industry Update Session at Supercomm:

IP Networks: Another Step Closer on Monday, June 21, 10:00 am–11:30 am. This session is open to the public at no charge. Please come and show your support for the IPCC and its members on this panel.

4.0 7th Annual SuperComm SUPERQuest Awards Ceremony at Supercomm 2004

Michael Khalilian has been selected as a judge for the SUPERCOMM SUPERQuest awards in the Next Gen Products and Service Providers category.

TMC Invites IPCC Members to Attend A Special Evening Boat Cruise at Supercomm

Sponsored by TMC and CommuniTech
on June 22, 2004

COME SAIL AWAY with us on The Odyssey, Chicago's most luxurious cruising vessel, for a unique networking event. As Chicago's premier entertainment destination, The Odyssey provides a unique dining experience with an unmatched view of the skyline. The evening includes a four-course meal, open premium bar, live entertainment, and a photo as you board the ship.

This event is sponsored by Technology Marketing Corporation (TMC) , publishers of Internet Telephony magazine and the producers of the Internet Telephony Conference and Expo and CommuniTech, Global distributors specializing in creating customized, cost-effective voice processing solutions.

Date: Tuesday, June 22, 2004

Boarding Time: 6:00 p.m. - *Be prompt!* - Boat returns at 10 PM

Tickets: Two boarding tickets per IPCC member company will be available. Tickets will be held under your name and you will need to pick them up at the pier prior to boarding. If you wish to bring more than two members of your company, additional tickets are available for purchase with prior notice. Additional tickets are \$134.00 per guest.

RSVP: Kindly **respond on or before June 14, 2004** to Debbie Hetland at 510-744-4020 or by email at dhetland@dslforum.org. Please be sure to indicate if you wish to purchase additional cruise tickets.



IPCC Participates in CommunicAsia 2004

CommunicAsia is extending a 10% discount on registration for IPCC members. The IPCC will once again be participating in CommunicAsia (www.CommunicAsia.com), June 15-18, 2004 in Singapore. Eric Burger will be speaking at the show in the "Next Generation Network" session and the IPCC provided some significant input into the design of the conference program. For additional information on this please contact Manuel Vexler:

(512) 347-8886 ; mvexler@packetcomm.org

If you have any questions, suggestions or topic ideas for upcoming newsletter and educational notes columns, please contact IPCC PR Cathy Clarke at CNC 617-527-2089 or cathy@cncassocs.com.