



Message From The Chairman

Dear IPCC Members,

It's been quite busy year for the IPCC and our industry. We began the year by changing our name from the International Softswitch Consortium (ISC) to the International Packet Communications Consortium (IPCC) to better represent our membership and the work that we do. With this change, we were able to recruit companies that were not only "softswitch" focused but are more widely interested in the advancement of the "packet communications" industry as a whole.

This fall, we formally established the Service Provider/Integrator Board, the purpose of which was to gather leading service providers and integrators from the industry to provide the organization with direction on what is important to them. We've held several forums and meetings with the group and have developed some great ideas that we hope to implement in 2004.

We have some exciting new projects that we're kicking off for 2004 including some of the US and international associations and forums partnerships. (We will be making announcements beginning of the year).

One of those is collaboration with the CompTel/ASCENT Alliance (www.comptelascent.org). We will be co-locating the first IPCC member meeting of 2004 with their Spring Convention & Expo in Anaheim, CA in February. The IPCC will also be hosting the Voice over IP track at the conference, contributing our knowledge and expertise in this area.

The collaboration also includes special offers and pricing to IPCC members for both the exhibit and the attendance fees. Some of these offers expire January 15th so please visit our web site (www.packetcomm.org) for details.

On behalf of everyone here at the IPCC, I wish you a very happy holiday season and look forward to a productive and prosperous 2004 for you and your companies. As always, if you have any news or announcements, please forward them to me. We'd be happy to include it in the next issue of the newsletter.

All our best for this holiday season.

Regards,

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Natural Convergence Wins Industry Recognition



Natural Convergence has been honored with one of Communications

Convergence's prestigious Product of the Year awards. In its December 2003 issue, the magazine has recognized Natural Convergence for its *silhouette* product offering: a carrier-hosted VoIP service designed specifically to address the unique needs of small businesses and branch offices of larger enterprises. As the driving and defining voice of enterprise telecom, Communications Convergence annually recognizes the innovation and merit of companies that have played a dominant role in the advancement of the IP telephony industry over the last year.

Natural Convergence was selected by the publication's editors for demon-

strating vision, leadership, and a strong commitment to *silhouette's* target market. The small and medium-sized enterprise (SME) market makes up 48% of business in the United States and generates \$43 billion in revenue in telecom products and enhanced services. Natural Convergence's *silhouette* unlocks a huge opportunity for Carriers to better serve SMEs by offering a virtual key system to replace their aging phone systems.

Communications Convergence applauded *silhouette*, noting that "the real genius is simply that Natural Convergence's platform lets carriers go to...[key system] owners with a 'new, new thing' (i.e., hosted telephony), show them how it's going to save them money, and sign them up."

While phone services for larger enterprise are rapidly evolving to packet-based systems, the SME market – currently dominated by key systems – has been left without an appropriate upgrade option. Instead, SMEs are forced to accept complex solutions designed for big business, which many cannot afford and are unable to manage for themselves due to a lack of technical resources. *silhouette* is a simple to use, packet-based service that is hosted in the Carrier's network and delivered to the user's desktop over existing data networks to cost-effective IP phones. The service delivers many benefits to the SME including cost savings, control, and the ability to customize their service to meet their specific needs.

AT&T And Others Roll Out VoIP



No. 1 long-distance carrier AT&T announced plans to sell

Internet phone service to consumers and to more businesses in 2004, say people familiar with the matter.

CEO David Dorman, speaking at an investor conference, detailed the opening phase in what would be the first national rollout of calling (VoIP) calling. It will be the most concrete indication yet that the promised cheaper alternative to regular phone networks is ready for prime time.

AT&T's announcement comes days after Time Warner, the No. 2 cable operator, said it would offer a VoIP on its cable systems via joint ventures with MCI and Sprint. Earlier in the month, No. 4 local phone company Qwest Communications began offering VoIP in Minneapolis/St. Paul.

Such services pose a major competitive threat to regular phone companies, which are considering their own

offerings of VoIP to home and business customers.

Most VoIP until now was limited to start-ups such as Vonage, with fewer than 100,000 subscribers. There remain significant hurdles to consumer acceptance:

- Consumers who don't have a cable or digital subscriber line (DSL) broadband connection must buy one, at \$25 to \$45 a month.
- Handling 911 emergency calls over VoIP is still being worked out.
- Maintaining service in a power outage is being worked on.
- Options for hooking up multiple home phones to a VoIP line are limited.

VoIP is cheaper because it transmits phone calls as data packets over the Internet, a more cost-efficient routing than traditional phone lines. VoIP also has escaped many of the regulatory fees and taxes levied on traditional phone calls. Service typically costs \$35 to \$40 for unlimited local

and long-distance calls, as well as calling features. That compares with about \$50 to \$60, plus about \$10 in taxes and fees, for similar plans via traditional phone providers.

VoIP service also has potential benefits beyond price. With Qwest's service, e.g., customers can go to a Web site to view a log of missed, incoming or outgoing calls. There, they also can schedule calls to forward to another number at a specified time. Eventually, they will be able to view and hear voice-mail online. AT&T features will be similar.

AT&T believes its plans are more ambitious than those unveiled by rivals. That's because it would be national, and it will be offered to consumers with cable or DSL broadband. AT&T already offers VoIP to businesses and plans to market that more aggressively worldwide.

Global Crossing Launches DSL, VoIP



Wasting no time after emerging from bankruptcy, Global Crossing today launched DSL in the U.S. through an agreement with Covad and announced plans to deploy voice over IP services over the new copper access platform in early 2004.

Covad will supply symmetric DSL services in its 1600 central offices throughout a 96 major market footprint. Through interconnection partnerships, Covad also has ac-

cess to smaller and medium-sized markets. In addition to the access platform itself, Covad will provide IP VPN and frame relay service over the new connections.

By the end of 2004, Global Crossing will be deploying a commercial VoIP service over both Covad's DSL connections and its traditional enterprise access portfolio. While Global Crossing has been using IP for transport and taking other carriers' VoIP traffic onto its network, this will be the first time Global Crossing

offers a service directly to its enterprise customers, Christie said.

Global Crossing, while primarily a long-haul voice and data carrier, has been ramping up its IP and access services over the last few months, preparing for its Chapter 11 exit.

It recently launched DSL services in the UK and has been rebuilding portions of its network to handle the conversion from TDM to packet traffic.

Level 3 Ports Voice Traffic Over IP

Level 3 announced it has begun offering carriers direct IP links into its backbone for voice traffic, allowing wholesale customers to create end-to-end voice over IP connections over their networks.

The service targeted at both next-generation carriers and carriers upgrading their legacy system is designed to eliminate the TDM switch and its high interconnection costs from their networks. Those carriers can simply hook directly into an IP port in one of



Level 3's 18 facilities in the U.S. and Europe.

Level 3 also announced its first customer for the new VoIP product, T-Systems, a Frankfurt-based company that will use the direct IP interfaces to carry traffic out of Europe and Asia into the U.S. Though Level 3 didn't reveal any of the financial details of the deal, the agreement provides for multiple DS-3s

worth of traffic.

Other domestic next generation carriers and international carriers are now running interoperability trials over the network and Level 3 hopes to announce additional customers soon. While many of these customers use Level 3 data services, all of their voice traffic will be new capacity on the network, so Level 3 will not be cannibalizing its TDM revenue for IP revenue.

News From Around the Industry

- Bankrupt competitive local exchange carrier Allegiance Telecom has agreed to an offer from Qwest Communications wherein Qwest will purchase almost all of Allegiance's assets (excluding its customer premises equipment business, called Shared Technologies) for approximately \$300 million in cash.
- Panelists speaking yesterday at a web seminar sponsored by the U.S. Telecom Association said that VoIP providers likely would have to comply with CALEA requirements, but the lack of a fully complaint industry standard would enable them to dodge their obligations for the foreseeable future.
- Vonage announced an agreement with CableAmerica to deploy its private label VoIP service in Arizona, Missouri, California, and Michigan. The agreement is the fourth with a cable operator and is expected to be followed up by others over next few week.



Sonus Expands Softswitch Architecture

Sonus Networks launched a new version of its Open Services Architecture that rolls in several additional capabilities to its existing GSX9000 Open Service Switch and Insignus Softswitch.

Among the most significant improvements is the addition of peering, calling carriers to connection with each other's IP networks without converting calls to circuit switch formats. Indeed, Sonus is trying to develop a new category of product — the network border switch, in part based its softswitches' ability to peer. Additionally, the new packet-



to-packet interface lets service providers use IP as the interface of choice to enterprise customers.

Sonus' GSX9000/Insignus combination is targeted at those carriers that have previously cobbled together a multiple single-box solution. Among the laundry list of capabilities in the new equipment: network address translation (NAT) and topology hiding, access control via pinhole

firewall, denial of service protection, bandwidth and QoS theft protection, signaling-based admission control, and SIP and H.323 proxy.

At the same time Sonus, which is providing softswitches to Qwest and AT&T among others, is trying to head off the competition, which has been heading in this direction for the past several months. Emergent, for instance, has been offering a combined session border controller/softswitch for most of the year, said Nathan Franzmeier, CEO of Emergent.

Time Warner Partners With Sprint & MCI For VoIP



Time Warner Cable has contracted with MCI and Sprint to carry long-distance traffic, terminate calls over the PSTN and provide enhanced features for Time Warner's upcoming nationwide rollout of voice over IP.

The two IXCs each will handle half of the MSO's Voice over IP traffic, though the companies did not say specifically how the different mar-

kets would be divided. In addition to terminating Time Warner's VoIP traffic and converting its packets to circuit calls, Sprint and MCI will handle provisioning phone service, deliver enhanced 911 service and support local number portability in their perspective markets.

Time Warner launched a trial of its Digital Phone Service earlier this year in Portland, Maine. That was followed up

by a trial with select customers in its North Carolina markets. With the new Sprint and MCI deals in place, Time Warner officials said they will begin an aggressive rollout of services throughout its markets next year.

Time Warner is bundling the services with its broadband and cable programming services, offering flat-rate bundles of unlimited local, long distance and in-state calling.

The number of Dedicated IP VPN sites in the U.S. is projected to grow from less than 100,000 in 2002 to almost 345,000 by the end of 2007, a CAGR of 29%, - Emerging Networks Service, Vertical Systems Group's premier web-based research resource.

Packet-based Comms—Market Research

- Japan cements its position as the leading DSL country with 9.2 million total subscribers, followed by the U.S. at 8.2 million users and China at 7.8 million subscribers.

Not surprisingly, China led subscriber growth in 2003, added 2.2 million lines in Q3 alone. Japan was the

second fastest growing nation at 971,400 additional subscribers while U.S. providers added 667,700.

South Korea continues to lead the rest of the world in market penetration, with more than 30% of the country's population subscribing to some form of DSL. More than 20% of South Korea

subscribers have upgraded to VDSL services.

- Asia Pacific service provider revenue is increasing 15% from 2002 to 2003 to \$139 billion, and capital expenditures are rising 3% to \$30 billion, representing a capex-to-revenue ratio of 22%, according to the Infonetics Research

Upcoming Events

CompTel Spring Convention and Expo

Anaheim Convention Center

February 8-10, 2004

IPCC Member Meeting

Anaheim Convention Center, Anaheim, CA

February 11, 2004

Spring VON 2004

Santa Clara Convention Center

March 28-April 1, 2004

China VoIP 2004

The Great Wall Sheraton Hotel, Beijing

13 May 18-20, 2004

CommunicAsia 2004

Singapore

June 15-18, 2004

For additional information on the above listed events, please contact Paul Ritchie at PRitchie@inventures.com, +1-925-275-6654 or visit www.packetcomm.org.



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About The IPCC

“The International Packet Communications Consortium (IPCC) is the premiere forum for the worldwide advancement of the next generation networks through products, services, applications, and solutions utilizing packet-based voice, data and video communications technologies available today via any transport medium including but not limited to copper, broadband and fiber optics.

The IPCC establishes a common terminology for the softswitch-based architecture, and it promotes interoperability, conducts research, and liaises with governmental and industry organizations to address industry issues that service providers and vendors face. By providing a variety of educational seminars and by fostering the Open Network and Standard Interfaces, the Consortium accelerates the advancement and usage of softswitch-based networks.

The IPCC membership includes wireline and wireless service providers and carriers, governmental agencies, standards bodies, and equipment and software vendors representing all network elements involved in the softswitch-based and next generation network.”

Upcoming Projects

Voice over 802.11 document: This document will provide an overview of the benefits of providing Voice over 802.11 over packet technology and how this technology might be implemented in various networks.

Introduction to OSS in a Packet Environment document: This introductory document will provide an overview of the essential elements involved and needed in an OSS infrastructure for a packet-based environment.

Hosted Services research: This study will focus on end users and the wants and needs they have in the telecommunications/data area. Both service providers and vendors will benefit from this study.

Network Boundary Project (Session Border Control & Security): to develop a clear understanding of Network Boundary issues and solutions, description of the network architecture to include network boundary elements and various implementations, and develop any recommendations as appropriate.

Government Liaison Committee: The goal of this group is to educate policy makers, including FCC, state commissions, as well as Congress and the administration on technical and policy issues affecting the packet communications industry. The group will provide regular updates on FCC and other agency proceedings that may affect the industry. Based on these, the group will determine what and how the IPCC will advocate.

Recently Completed Documents:

- Softswitch as a CLASS 4 Tandem Replacement
- Introduction to Hosted Services
- Leveraging Legacy Networks while Delivering Enhanced IP Services

To Access these and other documents, please visit <http://www.packetcomm.org/dms/categorylist.asp>

Recent Announcements:

- IPCC Releases two new white papers: Softswitch as a CLASS 4 Tandem Replacement and Leveraging Legacy Networks while delivering Enhanced IP Services
- IPCC Announces Election Results for Its New Board of Directors
- IPCC Establishes Special Service Provider Integrator Board to Guide Activities of the Organization

To read these and other IPCC Announcements, please go to: http://www.packetcomm.org/newspr/press_releases.asp