



## Message From The Chairman

Dear IPCC Members:

I have some great news to share with you. The ISC will very soon become the International Packet Communications Consortium (IPCC). The reason for the change is very simple. The ISC has always been about more than just softswitching so it is time for the organization to broaden its scope and move forward. The organization has represented not only companies that develop "softswitches" but also those who develop applications, media gateways, testing equipment, billing software, etc. The industry is now about more than just softswitching as well – its about Packet Communications. Over the past few months, I've been talking to numerous service providers and they have also been reluctant to join a "softswitch" organization. Rather, they feel that there is a need for an organization that addresses issues concerning the move to a packet architecture. Packet Communications encompasses softswitching as well as all the other components of the next generation network. We're diligently working on this and will notify you shortly when the transition is complete.

In the meantime, we still have a lot of exciting activities going on. This month, I'd like to highlight the events that the IPCC will be participating in. Some of it requires your participation so please contact myself or Lily Sun ([Lsun@inventures.com](mailto:Lsun@inventures.com)/310-937-7691) for more information:

### IN-IP Forum, February 10-13, 2003, Orlando, FL

The IPCC has a booth at the show and numerous IPCC members will be speaking at the conference. If you'd like to send your company/product collateral for the booth, please contact Lily.

### IPCC Member Meeting, March 31, 2003, San Jose, CA

This meeting will highlight some of the activities that we've been working on over the last year. The Yankee Group will be on-site to present the findings and answer any questions on the IPCC commissioned study of service providers from around the world. Various working groups will also provide their update and planned activities for 2003. In addition, we will have a panel of service providers from the wireline, wireless and cable sectors to present their views on the development of next generation networks for their segment. Please see [www.softswitch.org](http://www.softswitch.org) for information and to register. The meeting is free to members!

### VON, April 1-3, 2003, San Jose, CA

Spring 2003 VON (<http://pulver.com/von/>), produced by pulver.com, is the event to attend for anyone who is interested in VoIP technologies. At Spring VON you will learn about the latest industry trends and meet the people, the products and the companies which are helping to redefine the state of the communications industry.

As a member of the IPCC, if you register <http://pulver.com/von/register.html> by March 30th using the special priority code: ISCMBR, you can visit the exhibit hall and attend the special VON " Keynote" sessions and general sessions for only US\$ 125. An updated exhibitor list is posted to: <http://pulver.com/von/exhibitors.html>.

### China VoIP Conference and Expo, May 27-29, 2003, Beijing, China

The IPCC will be giving a keynote presentation as well as chair a session on softswitching. This conference is designed for executives preparing the groundwork for deploying softswitches in their network. It is also for systems integrators, third party application developers, domestic and international suppliers of switching solutions and IP gateways, switching routing and service management software vendors, network infrastructure and VAS platform operators.

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## Message From The Chairman (Cont'd)

International and domestic experts will be there in strength to share their new knowledge and expertise with you. The CHINA SOFTSWITCH Conference is not to be missed for anyone involved in fixed line and mobile convergence, provisioning VoIP and multimedia services, switching management and engineering, softswitch project management, programmable switching, network planning, network operations and management, telecom strategy, applications development, management and planning, R&D, systems administration, product development and strategy, and services marketing. For more information and to register, please visit [www.china-voip.com](http://www.china-voip.com).

### **SUPERCOMM 2003, June 2-5, 2003, Atlanta, GA**

The IPCC will once again be a part of the SUPERDemo and participate in the industry update sessions. If you're interested in being a part of the IPCC SUPERDemo, please contact Lily.

For 16 years, SUPERCOMM has been the single most important industry event that let's you see what is — and what will be. It is the premier annual communications and information technology exhibition and conference. Tens of thousands of communications leaders from around the world will attend SUPERCOMM 2003 because they know it is the time- and cost-efficient way to gain insight and information on critical issues that will impact them for years to come. SUPERCOMM is where industry insiders, technology visionaries, educators and exhibitors come together to leverage global trends, shape the future and share their success. Join them in exploring all the network infrastructure solutions essential for success. For more information and to register, please visit [www.supercomm2003.com](http://www.supercomm2003.com).

### **CommunicAsia2003, June 17-20, 2003, Singapore**

The IPCC is co-organizing a full-day Next Generation Network conference on Wednesday, June 18. CommunicAsia2003 will be back with an ICT showcase more exciting than before! A new show, EnterpriseIT, designed as a showcase platform for IT solutions, software and hardware providers, joins MobileCommAsia, NetworkAsia and SatComm under CommunicAsia's umbrella of shows. And with 5 pavilions dedicated to the industry's most talked-about technology, namely Bluetooth, Optical Networking, Security Solutions, Wireless Internet and Smart Card, CommunicAsia2003 will be highly anticipated by the ICT industry in 2003.

In 2002, CommunicAsia saw a gathering of industry professionals from all over the world where business and networking opportunities played centre-stage amidst a showcase of the latest ICT. Despite the uncertainties in the global market, CommunicAsia delivered a 13% increase in overseas visitorship and attracted a total of **37,322 visitors** from 89 countries, further reinforcing its reputation as a must-attend event in the ICT industry. For more information and to register, please visit [www.communicasia.com](http://www.communicasia.com).

A successful IPCC event involves you, our members. So, if you are interested in having a presence at any of these events, please let us know. As always, please feel free to contact me directly if you have any suggestions for activities or projects. We are here for the members and are open to your input!

Regards,

Michael Khalilian

## Cablevision Announces Consumer VoIP

Cablevision is the second large cable company to announce consumer voice-over-IP (VoIP) services this month. Cablevision has launched a consumer voice-over-IP service, called Optimum Voice, for its Optimum Online broadband customers.

The service, which is unannounced and is being offered only to limited areas of Long Island, includes many of the features of other consumer VoIP offerings. For about \$35 per month, subscribers receive unlimited calling in the United States and Canada, plus five calling features: caller ID, call waiting, call return (\*69)



three-way calling and call forwarding.

Cablevision is characterizing the deployment as a trial, though it is not described that way on the customer Web site. The company says it does not want to release technical details of the project until its near full deployment, likely in the third quarter of this year.

The Cablevision service is unique

among recent announcements of consumer voice over IP in that it offers 911 service. However, customer service representatives at the company's call center caution would-be subscribers to retain at least one traditional phone, wireline or mobile, because the service will not function if there is a power outage.

There are reports that Cablevision may be offering the service for as little as \$30 in some areas as a promotion. The areas where the service is offered now include parts of Nassau and Suffolk counties.

## VocalData Announces Customer Contracts

VocalData announced Select Connect as its 20th customer. Select Connect, a Mississippi-based integrated communications



provider, has standardized on

the VocalData VOISS solution. The VOISS server and comprehensive application suite will serve as the IP telephony platform for Select Connect's new business bundle, which includes local services, long distance

and Internet access.

VocalData also announced an expanded alliance and product interoperability with Telica, which provides softswitch-based voice and data infrastructure products. Compatibility between the two products increases service provider options for building multi-vendor, IP-based networks while minimizing the time and complexity associated with network testing, integration and implementation.

ICG Communications Inc., a provider of internet and broadband services is rolling out a nationwide next generation IP voice and data solution for business using VocalData's hosted IP telephony application suite, VOISS™. VOISS is integral to ICG's VoicePipe next generation business solution, providing users a wide array of business telephony features, conferencing applications, and flexible attendant options.

## Taqua Signs Carr



Carr Telephone,

a rural local-exchange carrier (RLEC) based in Branch, Michigan has moved to a packet switch as part of a cap-and-grow strategy to replace its TDM infrastructure. The company will deploy the Taqua Inc. OCX as a replacement for a legacy Nortel Networks Inc. DMS 10. Carr says a factor in its decision was the high cost of upgrading and maintaining the switch. Carr Telephone provides an array of telephony, Internet and cellular services (via a partnership with ALLTEL) to its subscriber base.

## Tele-Media Offers Gemini's Hosted Voice



Faced with emerging competition from hosted

IP voice companies, such as Vonage and Packet8, a Top 20 cable operator, Tele-Media, is offering its own hosted voice service to its broadband customers, using the service infrastructure of voice-over-IP wholesaler Gemini Voice.

Gemini Voice allows Tele-Media to get into the voice market with minimal up-front investment, while broadening its service package to reach the cable holy grail of a "triple

play": voice, video and data. It also provides a service that will help the company retain customers that might otherwise be lost to satellite video and/or retail hosted voice providers outside its network..

Gemini uses a softswitch of its own design that it says supports the three leading call-control protocols: H.323, SIP and the cable industry version of MGCP, called NCS. The company also designed its terminal adaptor, called the Gemini Gateway, and has it manufactured in Taiwan.

## UTStarcom Wins Customer, Industry Recognition

UTStarcom, Inc., announced the official launch of service for the first IP-based Personal Access System (iPAS) wireless system in Vietnam. Vietnam Post and Telecommunications (VNPT), the largest telecommunications service provider in Vietnam, activated city-wide iPAS-based Cityphone Service in Hanoi, Vietnam's capitol, on December 19, 2002. VNPT also launched Cityphone Service in late January 2003 in Ho Chi



Minh City. The value of the contract for deploying iPAS in both cities is approximately \$20.0 million.

Separately, Infonetix Research named UTStarcom the world's leading vendor of softswitch solutions in the third quarter of 2002. According to the report, UTStar-

com shipped 59 percent of all softswitch ports worldwide in the third quarter 02. In the second quarter 02, by comparison, the company held 51 percent of the market. The Infonetix report noted that the mSwitch dominates the Asia Pacific market and that UTStarcom is expanding mSwitch sales into other areas, especially in underdeveloped regions such as Eastern Europe and Latin America.

## ITXC Picks Cisco



ITXC selected Cisco Systems' AS5000 Universal Gateway and PGW 2200 Softswitch as its next-generation inter-carrier voice network. The build out, which will eventually span the 175 countries that ITXC serves, has been going on for some time now and will continue on an opportunistic basis.

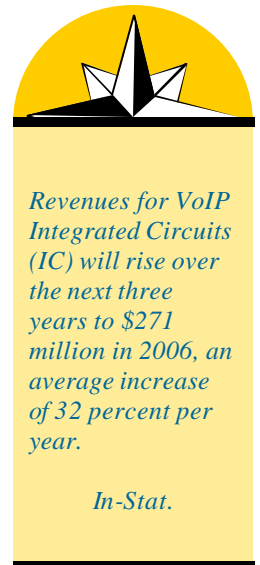
The move will replace Excel

switches and VocalTec gateways with a single Cisco box at customer locations. However, the company would continue supporting VocalTec gateways and would bring on additional customers with VocalTec equipment if needed.

For ITXC, the move to single-vendor network is possible in part because interoperability between Cisco and other vendors has been established. It also costs less and will lead to a more reliable network, ITXC said.

## Equant's DSL

Equant will launch DSL later this month providing another option for its end-to-end IP VPN solution. Equant would deploy DSL initially in 8 countries including the U.S. by the end of February as a compliment to its IP VPN and LAN access solutions. Equant, however, is not getting into the DSL carrier business. Instead, the carrier is trying to bring remote sites with smaller capacity needs into its customers' networks.



## News From Around the Industry

- Birch Telecom, Inc. and Ionex Telecom, Inc. announced that the two companies will merge, creating one of the largest competitive telephone service providers in the southern and central United States. The combined company will serve over 500,000 telephone lines, heavily concentrated in Texas, Oklahoma, Missouri and Kansas, and generate \$350 million in annual revenues.
- Alcatel has acquired the technology of Aravox Technologies Corp., a privately held company in Arden Hills, Minnesota. Aravox's expertise/knowledge is now part of Alcatel's Next Generation Network offer. The acquisition of Aravox technology strengthens Alcatel's Next Generation Network product portfolio by adding a session border controller to the Alcatel 5020 Softswitch based solutions. The Aravox session border controller, relying on the IETF Midcom standard, makes real-time packet peering over IP secure and ensures high availability of network resources to the end-to-end communications it controls.

## Emerging Softswitch Applications in Mobile

By Payam Maveddat, Chair, IPCC Technical Advisory Council, Sr. Director, Product Management & Marketing, Santera Systems

As mobile wireless market continues to grow and expand, wireless carriers are adding more mobile switching centers (MSC) and radio access networks (RAN) to accommodate traffic. Also, bundling of long distance service with mobile phone service has increased the usage and introduced a new peak in network usage in areas where RANs are typically designed for coverage than capacity, causing serious call blocking and quality of service issues. As such, wireless service providers are evaluating technologies to reduce their CAPEX and OPEX to remain competitive, reduce customer churn, and improve service.

Softswitch-based network architecture is one solution that may provide CAPEX and OPEX relief for wireless carriers in reducing interconnect charges, decreasing the cost of trunking, and extending the life of existing networking equipment. Similar to wireline, the initial move towards packetization will be in the core wireless network with migration to access as 3G radios are more widely deployed. Few softswitch-based approaches are discussed:

### Gateway MSC:

Deploying an increased number of MSC/VLRs (Visitor Location Area) typically reduces the geographical area of coverage per MSC/VLR. Regular location updates by MSC/VLR and Home Location Register (HLR) also strain the computing resources. As such, for geographical areas where there are a number of MSC/VLRs, a new MSC is introduced that acts purely as "Gateway MSC" (G-MSC), responsible for being the entry point of all incoming calls to the area. G-MSC queries the HLR for incoming calls to determine the location of the mobile subscriber and subsequently routes the call to the serving MSC/VLR where the subscriber is currently located. This approach reduces the load and port utilization on MSC/VLR housing the roamed subscriber's NPA-NXX. G-MSC also serves as a single point for access to enhanced services such as voice mail, mobile number portability query, and prepaid.

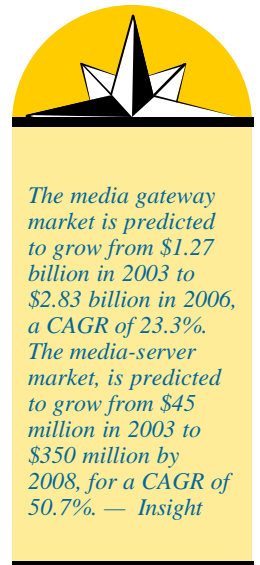
### Distributed MSC:

In a Distributed MSC model, media gateways are remotely deployed in various markets

and are controlled by a centralized softswitch with transport over packet backbone. D-MSC model reduces the OPEX and CAPEX by providing community of interest switching locally in small markets while providing a centralized call control that would share call processing capacity and network management resources.

### WiFi/PCS Integration:

Integration of WiFi and macro cellular/PCS may also bring some OPEX relief. As WiFi is deployed more widely in residential areas and hot spots, wireless carriers are contemplating the use of dual-mode hand sets (WiFi – Macro Cellular, GSM or CDMA) that would register with a WiFi network when the signal is detected. This model would allow the service providers to carry traffic over an IP-based broadband access using VoIP protocols. This would provide a capacity relief and eliminate the need for deployment of additional macro cellular RF equipment during off peak hours or in hot spots where macro cellular RF cannot provide adequate coverage.



*The media gateway market is predicted to grow from \$1.27 billion in 2003 to \$2.83 billion in 2006, a CAGR of 23.3%. The media-server market, is predicted to grow from \$45 million in 2003 to \$350 million by 2008, for a CAGR of 50.7%. — Insight*

## Packet-based Comms—Market Research

A new report from **IDC** sees the overall market for voice-over-IP equipment improving, not just for enterprise markets but for service providers as well. IDC forecasts a 66% increase in equipment sales to enterprises for 2003 alone. "The overall market is projected to increase at a com-

pound annual growth rate of 45% to reach a revenue base of \$15.1 billion by the year 2007", the report says.

Worldwide shipments of DSPs, the specialized processors used widely in IP voice, as well as all multimedia processing, grew 14.1 percent

from 2001 to 2002, buoyed by a ballooning of demand in December, according to a periodic report by **Forward Concepts**, titled "World Semiconductor Trade Statistics." Total shipments were valued at \$4.86 billion.



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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 Technology Documents

Over the course of next few weeks, IPCC will release a number of Technology White Papers to its consortium members. A brief overview of these documents is as follows:

### • **Softswitching in Wireless:**

Various Research, Development and Strategic Technology teams are partnering to develop a softswitch reference architecture model. The document will define the three general areas for Softswitch in Wireless that is emerging this year:

- Packet Gateway MSC for local and long distance
- Distributed MSC
- WiFi Integration with Macro Cellular

### • **Packet-based Communications—Hosted Applications:**

Next-generation VoIP networks will have many functions to deliver the best performance if those functions are hosted. That functionality will reside in multiple hardware and software components. The question is not how many components will be needed but whether the network is intelligent enough to control the diverse services hosted across them. This paper will define how today's applications-enabled softswitch has the super-intelligence needed to drive these diverse components and deliver the variety of services in the VoIP networks of tomorrow.