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MESSAGE FROM THE CHAIRMAN



Michael Khalilian
IPCC Chairman
and President

Fellow IPCC Members:

It's certainly becoming clear that VoIP is not just for wireline and cable anymore. WiFi and WiMax are at the heart of the VoIP revolution today. The challenge is integration issues and implementation of features and functionality. The IP Multimedia Subsystem (IMS) promises to merge

all VoIP services into a seamless, personalized solution, which IPCC already supports through its Working Groups.

VoIP is no longer an option – it is happening! As an industry, we need to work together to make VoIP a reality over all technology platforms. And as an unbiased, neutral technology forum – and the only packet communications forum – working to advance VoIP over broadband cable, wireless, and wireline, the IPCC is in a unique position to represent all parties and to help shape the future of VoIP from a technical standards, regulatory, and integration perspective.

It's critical that you participate in the process so that all service providers and suppliers can be represented. You can help by participating in the IPCC Working Groups which are focused on enhancing

VoIP deployments by developing architectural technology white papers, etc. You can also assist in marketing our cause by speaking at industry events around the world or writing byline articles for the telecom partner magazines. Whichever way you can contribute, the VoIP industry needs you!

We just had a very successful SUPERCMM show, during which we hosted an exhibit with four IPCC members demonstrating VoIP applications to the media. We also held our Annual Meeting, along with meetings of each Working Group and the Board of Directors. Congratulations to Global Crossing and NexTel who were appointed to serve on the IPCC

Board. In the beginning of June we also cosponsored and participated in the VoIP Security Workshop, a very well attended event in Washington, D.C., and the WiFi/VoWiFi conference in Baltimore, MD. We look forward to your valued contribution to the IPCC!

Thanks to all of you who are working hard to advance VoIP and x over IP (XoIP) applications.



Standing in front of the IPCC exhibit booth at Supercomm 2005 is (L-R): **Michael Khalilian**, IPCC; **Andy Profita**, Global Crossing; **Mark Richards**, VoX; **Anil Reddy**, Kancharla; and **Keith Hanna**, LignUp.

Michael Khalilian
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MEMBER PROFILE



Dennis Morton

*V.P., Product
Commercialization,
Global Crossing*

Global Crossing

Dennis Morton is the Vice President, Product Commercialization for [Global Crossing](#).

IPCC: What is Global Crossing's VoIP strategy for 2005?

Dennis Morton (DM): Global Crossing's VoIP Strategy is to continue to serve the global multi-national enterprise and global carrier wholesale customer with converged IP solutions including VoIP, IP VPN, IP Video, and Internet Access. Our VoIP portfolio includes outbound, inbound, and local calling services in various markets across the globe. Also, being a full service telecommunications provider, Global Crossing can help our customers develop a fully interoperable migration path from legacy voice and data services to a new converged environment.

IPCC: As an early adopter of a global VoIP platform more than four years ago, what advice do you have for other service providers who are just beginning to offer VoIP service globally?

DM: Global Crossing's advice would be to apply a relentless focus on the customer experience and how your company's solutions are solving business needs for the end user. Your solutions need to be designed to address the customer's strategic and tactical needs. VoIP is not just about technology, it's about your customer's experience, their call quality, the total cost of ownership efficiencies they achieve, and the support and security they receive from you as their service provider.

IPCC: How can service providers keep pace with the high growth predictions such as nearly 50% of all voice traffic in the industry will be VoIP by 2010 (Frost & Sullivan)?

DM: At Global Crossing today over 53% of voice traffic is transported as VoIP. We anticipate that 100% of our traffic will be transported as VoIP over our backbone by the end of 2007, so we will be ready to originate and terminate all voice traffic regardless of whether its IP or TDM. Migration towards an all IP environment is inevitable, so voice service providers need to ensure that they are prepared to support IP convergence and VoIP. We believe that service providers should start aggressively planning now for VoIP transport growth in their networks if they have not already. Service providers should benefit from lower internal costs and higher margins associated with IP convergence solutions, which will provide the rationale for investing in the IP technology to meet these customer requirements as soon as possible.

IPCC: What is your prediction for how quickly the convergence will take place for VoIP over wireline, wireless, and cable networks?

DM: We are seeing interest from the broadband telephony companies, and this has expanded into the cable, wireless, and traditional telephony provider segments as well. We also see previous switchless resellers implementing VoIP due to low barrier to entry, changing the makeup of that segment entirely. Enterprises are now showing signs of measurable adoption rates in 2006, with many now in late stages of planning or trial phases, with even a few deploying IP interconnections with their carrier. So we are already seeing the beginning of this with the very early adopters today. However, it is our opinion that a full industry migration will take some time to ramp up. If Frost & Sullivan's forecast is correct, the second half of this decade will deliver tremendous growth and user adoption will sky rocket. Service providers will need to have solutions/services in place for 2006 to meet that forecast. Furthermore, companies should consider the industry consolidation that is occurring and realize that this may have some impact on the time frames that we see full wireline and wireless solution convergence implementations.

IPCC SIZZLED AT SUPERCMM 2005

Albeit the show's last year, SUPERCMM 2005 was a great event for IPCC!

We had a successful IPCC Annual Meeting that featured Michael Tribolet, EVP of [Vonage](#), and Tony Thakur, VP, Engineering and Technology of [Time Warner Telecom](#) as guest speakers. Their presentations were compelling and very informative. Media and analysts attended our annual meeting as well.

The three IPCC Working Groups also met at the conference to finalize their technical white papers. All IPCC members should be involved in at least one Working Group in order to drive industry standards and architectures for voice over broadband cable, wireless, and wireline. Be sure to register for the Working Groups that interest you.

Here is an update from each of the Working Groups:

Wireless/Wireline Convergence Working Group

Co-chaired by [UTStarcom](#)'s Farshid Mohammadi, [NexTel](#)'s Ahmed Bencheikh, [Tekelec](#)'s Payam Maveddat, and Editor David Kiswani, the Wireless/Wireline Convergence Working Group is making solid progress in specifying the industry's first paper on using VoIP to transfer calls in progress between wireless, cable, and wireline broadband networks.

Network Boundary Working Group

The Network Boundary Working Group is developing another industry first by writing a technical document on the functional architecture of the SBC. This Working Group is co-chaired by [Acme Packet](#)'s Jim Hourihan and Annalisa Ouellette, and [Netrake](#)'s Micaela Giuhat.

Service Providers' Interconnectivity Working Group (joint meeting with the SIP Forum Service Providers WG)

This Working Group is co-chaired by [Global Crossing](#)'s Patrick Reilly, Time Warner Telecom's Earl Turner, and [XO](#)'s Ramani Pandurangan, and the group is finalizing edits on the IPCC VoIP Interconnectivity document.



Vonage EVP Michael Tribolet discusses Vonage VoIP solutions with attendees of the Annual IPCC Meeting in Chicago, June 2005.

IPCC Exhibit Rocked with the Latest VoIP Technology and Services

At SUPERCOMM, IPCC hosted an exhibit featuring the latest in VoIP technology from [VoX Communications](#), Global Crossing, UTStarcom, [LignUp](#), and [Kancharla](#). Demonstrations included VoIP applications, VoIP over WiFi, and other VoIP services, and visitors to the exhibit were able to make phone calls and actually use the VoIP features and functions. Operational aspects of VoIP were also demonstrated including provisioning, OSS, Integrated Access Device (IAD) functions, and WiFi VoIP phones. Thanks to all exhibit sponsors!

IPCC Spoke, and People Listened

IPCC Chairman and SUPERQUEST Judge, Michael Khalilian, hosted a panel at SUPERCOMM, which was comprised of industry executives including Time Warner Telecom's Sr. Director Earl Turner and Internet Telephony Founder/Group Editor-in-Chief Rich Tehrani. Executives at the well attended session provided an update on the status, direction, and economics of service and network migration. Thanks Michael, Earl, and Rich for being great representatives of the IPCC.

IPCC and TMC Teamed Up to Party

IPCC and [Internet Telephony Magazine](#) really know how to host a party – and even provided one of the greatest views on earth at the top of Chicago's Sears Tower. Hundreds of industry executives enjoyed the relaxing atmosphere which was great for networking and meeting the lovely Luvabulls for added fun. Thanks TMC for allowing IPCC to co-sponsor this event – we make a great team! Speaking of partnering with TMC, many exciting ideas were discussed at the show about how Internet Telephony Magazine/TMC and the IPCC can work together more in the future. Watch for some great teamwork going forward!

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For information on becoming an IPCC member, please visit our website at www.packetcomm.org or contact Debbie Hetland at dhetland@packetcomm.org.

IPCC INDUSTRY NEWSLETTER

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More 'Ubiquitous' IPCC News

If you've participated on any Working Group conference calls lately, you've been using [Ubiquity's](#) new conferencing service called Speak Conference Director. The solution includes Voice Plus Web Conferencing, coupled with presence and instant messaging.

Powered by Ubiquity's programmable SIP Application Server, Speak scales to support 20,000 concurrent users per system and leverages SIP and VoIP technologies to offer advanced conferencing features to PSTN, wireless, and IP end points. Features include browser-based initiation, management, and termination of conference calls, along with instant messaging and presence capabilities.

Speak's tightly integrated Web Collaboration capabilities allow organizers to share presentations, web content, applications, and documents in real time with individuals and groups across the office or around the world. With "one click login" from the Speak GUI interface, participants enter Web Conferencing without having to re-enter their name or passcode. Thanks Ubiquity – the service is working great!

Take Advantage of IPCC's Byline and IPCC's Speaker Bureau

The IPCC has been approached by a number of publications who are interested in publishing articles written by IPCC members. We have agreements with Internet Telephony Magazine and others. Also, we have many opportunities for industry experts ... if you are one, please register with the speakers bureau. Please submit any articles for consideration and requests for speaker registration to tammysnook@hightechpr.net.

IPCC Co-Sponsored VoIP Security Workshop

On June 1 & 2, IPCC executive Manuel Vexler was busy in Washington, D.C. chairing two panels at a national workshop on securing VoIP. Chaired by Professor Ram Dantu from the University of North Texas and co-sponsored by the IPCC and the CyberSecurity Alliance, the workshop was attended by 170 industry leaders and speakers, including federal agencies ([FBI](#), [DoD](#), [FCC](#), and [NIST](#)), service providers from wireless and wireline, vendors ([Cisco](#), [Avaya](#), and [NexTone](#)) and universities. The IPCC plans to continue to work with the VoIP Security Workshop team in setting up a live security network where security threats can be evaluated and solutions to the problems be tested. For more information contact [Manuel Vexler](#) or [Michael Khalilian](#) of the IPCC.

Mark Your Calendar

The IPCC will sponsor and/or chair panels at several upcoming shows this year. Please mark your calendar for the following events listed below:

August 4 San Francisco	VoIP Developer's Conference	• Speak on panel
Sept. 20 - 22 London	Carriers World Conference 2005	• Speak
Sept. 27 - 29 San Francisco	CTIA IT and Entertainment	• Speak
Oct. 5 - 6 Chicago	Fixed Mobile Convergence Live	• Speak
Oct. 9 - 12 Orlando	CompTel/ALTS	• Chair panel
Oct. 22 - 26 Las Vegas	Telecom '05 (USTA)	• Chair panel / exhibit
Oct. 24 - 27 Los Angeles	Internet Telephony	• Chair panel



FCC ACTIONS

FCC Requires Interconnected VoIP Providers to Provide Enhanced 911 Service

On May 19, 2005 the [FCC](#) adopted an order (the text of which was released on June 3, 2005) setting forth the 911 obligations of providers of interconnected VoIP services. The FCC also issued a notice of proposed rulemaking ("NPRM") regarding potential additional requirements that could be applied to service providers and equipment manufacturers. Within 120 days of the effective date of the order, interconnected VoIP providers must: **(1)** transmit all 911 calls, a call back number, and the consumer's "Registered Location" to the public service answering point ("PSAP") via the dedicated "Wireline E911 Network;" **(2)** satisfy this requirement by interconnecting indirectly with a 911 provider, directly with the Wireline E911 Network, or through any other means; **(3)** begin maintaining a "Registered Location" for every customer – no opt-out

allowed – that may be modified by consumers by multiple means, including use of the telephone; **(4)** distribute to new and existing customers a letter describing the E911 service provided (along with limitations) and warning stickers or labels noting that E911 service may have certain limitations; and **(5)** submit to the FCC a letter describing compliance with the above requirements and other aspects of the order. In the associated NPRM, the FCC seeks comment on whether it should require all VoIP terminal adapters and related equipment sold after June 1, 2006 to be capable of providing physical location information automatically. The FCC also seeks comment on whether and to what extent its rules should be expanded to VoIP services that are not fully interconnected to the public switched telephone network ("PSTN").

FCC Adopts Order Rejects SBC IP Forbearance Petition as Procedurally and Substantively Flawed

On May 5 the FCC released its order rejecting a petition filed by [SBC Communications](#), which asked the FCC to forbear from applying Title II common carrier regulations to IP-based services and platforms to the extent that such regulations apply at all. The FCC concluded that SBC's petition was both procedurally and substantively lacking because it did not specify either the common carrier regulations it wanted relief from or the specific IP services or platforms it wanted to out of the realm of Title II.

FCC Seeks Comment on Pac-West Petition for Clarification of FCC's Decision to Grant SBC Internet Services a Waiver of the Numbering Rules

On May 4 the FCC issued a public notice seeking comment on the [Pac-West Telecomm, Inc.](#) petition for clarification of the FCC's decision to grant SBC Internet Services, Inc. ("SBCIS") a waiver of section 52.15(g)(2)(i) of the FCC's rules. The waiver allows SBCIS to obtain numbering resources directly from the NANPA and/or the Pooling Administrator until the FCC adopts final numbering rules for IP-enabled services. Initial comments in CC Docket 99-200 were filed on June 4, 2005 and reply comments were due on June 20, 2005.

FCC Seeks Comment on Qwest Petition for Waiver of the Numbering Rules

On May 4 the FCC issued a public notice seeking comment on the petition by [Qwest](#) requesting a limited waiver of the FCC's numbering rules to allow Qwest to obtain numbering resources from the North American Numbering Plan Administrator (NANPA) and/or the Pooling Administrator (PA). Qwest seeks the same relief that the FCC granted in an Order allowing SBCIS to obtain numbering resources directly from the NANPA and/or the PA until the FCC adopts final numbering rules for IP-enabled services. Initial comments in CC Docket 99-200 were filed on June 4, 2005 and reply comments were due on June 20, 2005.

FCC Sought Comment on SBC Request to Exclude TIPToP Service from Price Cap Basket in 2005 Access Tariff Filings

On May 2, 2005 the FCC released a public notice seeking comment on a petition filed on April 22, 2005 by SBC Services, Inc., on behalf of the Pacific Bell Telephone Company, Southwestern Bell Telephone Company, The Ameritech Operating Companies, The Southern New England Telephone Company, and Nevada Bell Telephone Company (collectively "SBC"), requesting a waiver of section 61.42(g) of the FCC's rules so that it may exclude True IP to PSTN ("TIPToP") service from any price cap basket in the upcoming 2005 annual access tariff filing. TIPToP is a new SBC service that provides VoIP providers with connectivity to the SBC network. Initial comments were filed on May 9, 2005 and reply comments filed on May 16, 2005 in WCB/ Pricing File No. 05-24.

This monthly column is contributed by Ross Buntrock, Partner, Womble Carlyle Sandridge & Rice, PLLC.

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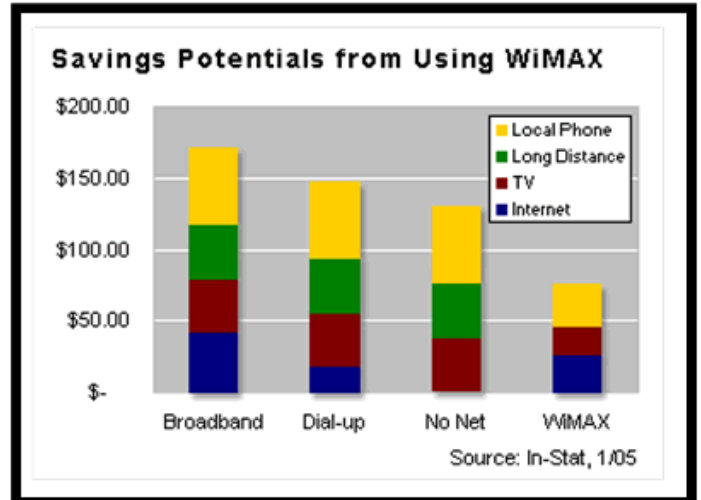
As a member of the IPCC you are eligible for a 15% discount when registering for the Fixed Mobile ConvergenceLIVE! event. Simply enter code *IPCC* when registering online. Visit www.scievents.com/convergence for details.

VoIP RESEARCH ROUND UP

DID YOU KNOW ... ?

- WiMAX, or Worldwide Interoperability for Microwave Access, is becoming a force in the wireless access arena in some parts of the world, reports [In-Stat](#) (Report: [WiMAX: The Rebel Broadband](#)). By 2008, worldwide sales for WiMAX equipment will be billions of dollars, but over half of it will be for Customer Premises Equipment. WiMAX, a new form of Broadband Wireless Access (BWA), helps shift the economics of broadband to make it cheaper than ever to deploy. However, WiMAX providers will need to bundle wireless broadband services with Voice over Internet Protocol (VoIP), so that consumers will save money every month, even though they are upgrading from dial-up Internet access to broadband.

- In-Stat has also found that:
 - Another area where WiMAX is expected to do well is as a way to provide Point-to-Point (PtP) links. A prime example would be with cellular BTSs that are currently using a leased line to provide a backhaul to the network.
 - Deploying a WiMAX-based network that reaches 98 percent of U.S. homes would cost an estimated \$3 billion – including equipment, towers, and other ancillary costs.
 - Beyond VoIP and broadband, WiMAX promises to eventually provide a solution for the high cost of cellular phone use.
 - There are also a myriad of other, smaller applications, such as helping with Homeland Security or traffic safety, that are open to WiMAX on an ancillary basis.



- London-based research firm [Visiongain Ltd.](#) reports that in 2005, global VoIP revenue will grow to more than \$80 billion, with North America contributing around three percent of revenues. The low cost of VoIP is the major driving factor for its adoption. With US broadband penetration over 30 percent, VoIP acceptance will be achieved. As for the wireless carriers, the emergence of voice over wireless LAN (VoWLAN) and hybrid cellular/Wi-Fi phones poses a dilemma. Both present an opportunity and a threat to mobile operators, one they will quickly have to develop a strategy for. Globally, around 10,000 dual-mode Wi-Fi/cellular phones were sold in 2004 and their exponential growth will drive wireless VoIP into the mass-market. According to the market analysis study, "[North American Telecom, International Telecom, and VoIP: A Global Market Perspective 2005 - 2011](#)," international VoIP revenue will reach \$84 billion this year, representing about 28 percent of international voice traffic revenue.
- The international telecommunications industry is in the early stages of a migration to Voice over Internet Protocol (VoIP), reports In-Stat. The consumer and small business VoIP ramp-up period will be from 2005 - 2009, and migration to VoIP will peak in the 2010 - 2014 time frame, the high tech market research firm says. This time frame is largely dependent on carriers' strategies for migration to the Next-Generation Network (NGN). The report, [Carrier NGN Migration Strategies Set VoIP Timing](#), says that carriers around the world are developing migration strategies that include network optimization, next-generation overlays, and PSTN replacement. These strategies will directly impact the type, quantity and timing of future equipment purchases. In-Stat has concluded that as VoIP competition and demand increases over the next five years, incumbent carriers will increasingly opt for PSTN replacement to lower operating costs.