WELCOME!

On behalf of the team organizing the 2005 IEEE Global Telecommunications Conference, I would like to invite you to join us in St. Louis, Missouri, USA from 28 November – 2 December.

The theme of IEEE GLOBECOM 2005 is Discovery: Past and Future. IEEE GLOBECOM 2005 will feature a diverse and exciting technical program, with results of research and innovation from an international collection of engineers in industry, government, and academia. These papers, posters, tutorials, workshops, and panels were selected for quality by members of the IEEE Communications Society Technical Committees. IEEE GLOBECOM 2005 has three illustrious plenary speakers; they, too, span industry, academia, and a government research lab. We are also continuing the very successful Design & Developers Forum and Telecom Business Forum. I would like to take this opportunity to thank all involved for their efforts in preparing our exciting program: the authors and invited speakers, the Technical Program Committee, our generous sponsors, the IEEE St. Louis Section, IEEE Region 5, the St. Louis Convention and Visitors Commission, and, of course, our hard-working IEEE GLOBECOM 2005 Executive Committee.

St. Louis is the perfect venue for our theme of discovery. In 1803, U.S. president Thomas Jefferson commissioned a small expeditionary group, named the Corps of Discovery, to explore the uncharted West. The leaders were Meriwether Lewis and William Clark. In March of 1804, Lewis and Clark attended ceremonies in St. Louis and then traveled thousands of miles to explore lands and rivers in the West. St. Louis is known as the Gateway to the West and there is much to discover here. We are organizing several social events. For those who wish to do some additional exploring on your own, you can tour the famous St. Louis Arch or enjoy a world-class Zoo and Botanical Gardens, the Science Center, the symphony, professional sports, and shopping. In addition, St. Louis offers a vast spectrum of dining and music. The conference hotel is the Renaissance Grand Hotel, chosen for its celebration of past and future; it is a beautifully restored historic building which originally opened in 1917 and which now offers the latest in amenities.

This brochure contains the highlights of the conference activities. For more information on the Technical Symposia, Tutorials and Workshops, Design & Developers Forum, Telecom Business Forum, and Social Events as well as Registration information, explore our website: www.ieee-globecom2005.org

Join us in St. Louis and celebrate discovery, both technical and cultural. The IEEE GLOBECOM 2005 Executive Committee will be here to welcome you.
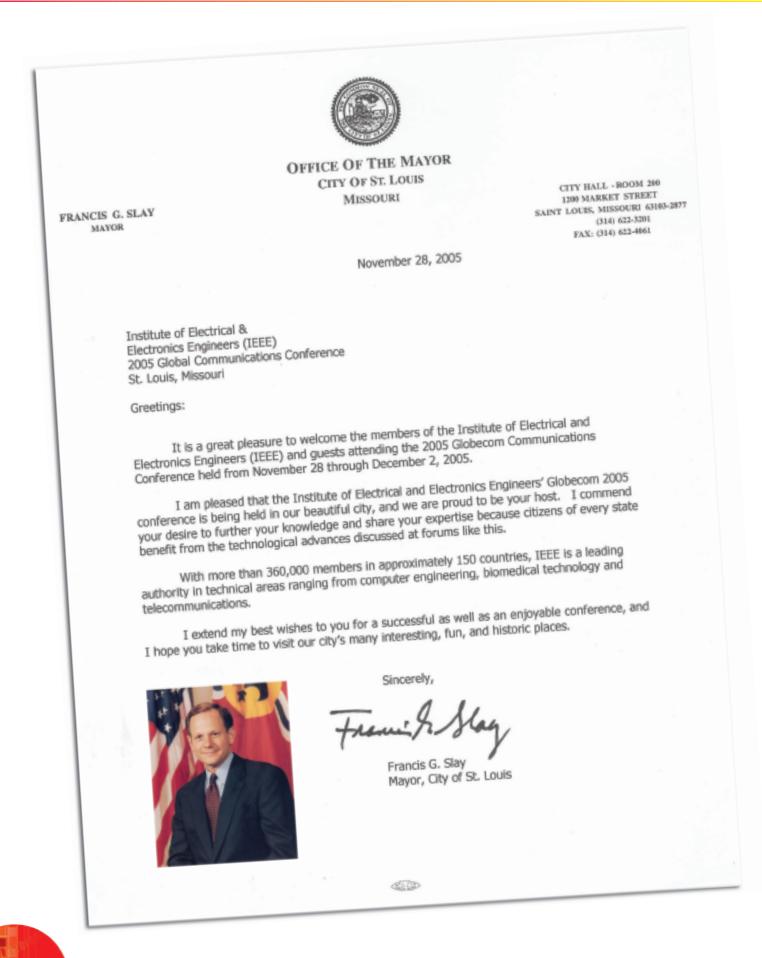
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November 28, 2005

Institute of Electrical &
Electronics Engineers (IEEE)
2005 Global Communications Conference
St. Louis, Missouri

Greetings:

It is a great pleasure to welcome the members of the Institute of Electrical and Electronics Engineers (IEEE) and guests attending the 2005 Globecom Communications Conference held from November 28 through December 2, 2005.

I am pleased that the Institute of Electrical and Electronics Engineers' Globecom 2005 conference is being held in our beautiful city, and we are proud to be your host. I commend your desire to further your knowledge and share your expertise because citizens of every state benefit from the technological advances discussed at forums like this.

With more than 360,000 members in approximately 150 countries, IEEE is a leading authority in technical areas ranging from computer engineering, biomedical technology and telecommunications.

I extend my best wishes to you for a successful as well as an enjoyable conference, and I hope you take time to visit our city's many interesting, fun, and historic places.

Sincerely,

Francis G. Slay
Mayor, City of St. Louis

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GARY D. FORSEE

Opening Plenary Keynote, Tuesday 9:00-10:15

Chairman and CEO of Sprint Corporation

Redefining the Telecommunications Industry

Biography:

Gary D. Forsee is chairman and chief executive officer of Sprint Corporation. He became chairman of the Board of Directors in May 2003 following his appointment as chief executive officer in March 2003. He has been designated chief executive officer and president of Sprint Nextel when that merger closes, which is expected later in 2005.

Forsee has spent more than 30 years in the telecommunications industry. Under his leadership as chairman and CEO, Sprint has emerged as one of the telecommunications industry's strongest competitors. Forsee transformed Sprint's operational structure by moving from product-focused divisions to a customer-centric model, allowing Sprint to more effectively market its broad portfolio of services and to focus on innovative retail and wholesale strategies that emphasize strategic partnerships. He combined Sprint's two tracking stocks into a single stock representing all of the company's assets. In 2004, Sprint's equity value increased by 72 percent, far outpacing the performance of every major industry competitor and outdistancing the major indices by significant margins. BusinessWeek magazine recognized him as one of the 19 best managers of 2004.

Prior to taking Sprint's top position, Forsee served as vice chairman of BellSouth Corporation where he had responsibility for all of BellSouth's domestic operations and chaired the Cingular Wireless joint venture. Upon joining BellSouth in September 1999, Forsee managed staff functions throughout the corporation and subsequently was president of BellSouth International.

Forsee initially joined Sprint in December of 1989 in the Government Systems Division, where he was president. Over the next nine years, he served as president-Business Services Group, interim chief executive officer of Sprint PCS, and president and chief operating officer of Sprint's Long Distance Division. In 1998, Forsee assumed the position of president and chief executive officer of Global One located in Brussels, Belgium, a joint venture of Sprint, France Telecom and Deutsche Telekom.

Prior to joining Sprint, Forsee was with AT&T and Southwestern Bell for almost 18 years. The position he held prior to moving to Sprint was vice president of government sales and programs in AT&T's Federal Systems Division.

Forsee holds a bachelor's degree in engineering from the University of Missouri at Rolla. He presently serves on the University of Missouri-Rolla Board of Trustees and is a member of The Business Roundtable, where he is a member of the CEO Committee to Encourage Corporate Philanthropy, The Business Council, the Kansas City Civic Council and serves on the board of the Goodyear Tire & Rubber Co. He was appointed to the National Security Telecommunications Advisory Committee by President Bush in May of 2004. Forsee previously served as chairman of the National Board of Trustees of the March of Dimes.

JONATHAN TURNER

Plenary Keynote, Wednesday 9:00-10:15

Ph.D., Professor at Washington University at St. Louis

Network Diversification - Enabling Innovation in Network Services

Biography:

Jonathan S. Turner received the MS and PhD degrees in computer science from Northwestern University in 1979 and 1981. He holds the Henry Edwin Sever Chair of Engineering at Washington University, and is Director of the Applied Research Laboratory. The Applied Research Laboratory creates experimental networking technology to validate and demonstrate new research innovations. The Lab's current projects center on extensible networking technology with a particular focus on high performance diversified routers.

Professor Turner served as Chief Scientist for Growth Networks, a startup company that developed scalable switching components for Internet routers and ATM switches, before being acquired by Cisco Systems in early 2000.

His primary research interests revolve around the design and analysis of switching systems, with special interest in systems supporting multicast communication. His research interests also include the study of algorithms and computational complexity, with particular interest in the probable performance of heuristic algorithms for NP-complete problems.

Turner is a fellow of ACM and a fellow of the IEEE. He received the Koji Kobayashi Computers and Communications Award from the IEEE in 1994 and the IEEE Millenium Medal in 2000. He has been awarded more than 25 patents for his work on switching systems and has many widely cited publications.

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JOAN WOODARD

Closing Plenary Keynote, Thursday 9:00-10:15

Ph.D., Executive Vice-President at Sandia Laboratories

Security Implications of Future Networking and Communications Systems

Biography:
Joan Woodard is currently the Executive Vice President and the Deputy Director for Sandia National Laboratories. She is responsible for Sandia's programs, operations, staff, and facilities; for developing policy and assuring implementation; and is responsible for strategic planning for the laboratory mission direction and quality of program performance. She chairs the laboratory management councils for Mission and for Risk Management Oversight, each comprised of the appropriate laboratory vice presidents. She also has the responsibility for the laboratory independent assessment of weapons' safety, security, and reliability.

Prior to her current appointment, Woodard was Vice President of the Energy Information and Infrastructure Technology Division. Her responsibilities included energy-related projects in fossil and renewable energy supply technology, geosciences, nuclear power safety and severe accident analysis; environment-related programs in remediation, nuclear waste management and repository certification as well as waste minimization; information technology programs in information surety, command-and-control systems, and distributed information systems; and programs responsible for security of the transportation of nuclear weapons and special nuclear materials and safety of commercial aviation.

Woodard joined Sandia in 1974 and conducted research in areas ranging from economic analysis of energy technologies and heat transfer phenomenon during combustion processes to waste management and pollution prevention. As Director of the Environmental Programs Center, she managed research-and-development programs, including site characterization and remediation technology, radioactive material transportation technology, and mixed waste separation processes and materials. She has worked in the national security and weapons programs of the lab leading a materials support group and managing the Neutron Generator and Explosives Component Center.

Joan currently serves on external panels and boards including the Intelligence Science Board (ISB) and the Army Science Board (ASB), where she has supported studies on Force Protection and Future Comb at System for Urban Operations. She has served on the Congressional Commission to Assess the Vulnerabilities of the US Infrastructure to Electromagnetic Pulse, as a study group member for the Defense Science Board (DSB) study on Homeland Security, and as co-chair of the special study of the National Security Space Program (NSSP) for the DoD and CIA. She also served on the National Academy Study on S&T for Countering Terrorism, resulting in the publication report "Making the Nation Safer." Joan is a lifetime member of the Society of Women Engineers; a member of the New Mexico Women's Forum; a member of the University of Missouri-Rolla Dean's Engineering Advisory Board and Board of Trustees; a member of the University of New Mexico School of Engineering Board of Visitors; a member of the Kirtland Honorary Commanders Advisory Council; and a member of the Family Security Group Board of Advisors Center for Security Policy. She serves on the Board of Directors of Bosque School and the Board of Directors for the Greater Albuquerque Chamber of Commerce. Woodard also serves as a corporate director for PNM Resources, Inc. (NYSE), serving on both the Finance and Governance & Public Policy Committees. She is a graduate of the Stanford Directors' College (2004).

Woodard holds a Ph.D. in Mechanical Engineering (Thermal Sciences) from the University of California Berkeley; a M.S. in Engineering Economic Systems from Stanford University; and a B.S. in Applied Mathematics and Computer Science from the University of Missouri-Rolla (magna cum laude). She has been elected to the Phi Kappa Phi Honor Society.

DESIGN & DEVELOPERS FORUM

In additional to the technical symposia, IEEE Globecom 2005 will feature the 3rd Annual Design & Developers Forum and the Telecom Business Forum. The forums are designed to meet the needs of the industry and to provide attendees a broad interest programming focused on telecommunication industry participation and attendance. Both forums are included with the IEEE Globecom 2005 registration.

Tuesday, 29 November, 10:30-12:15
Modeling and Simulation Tools for Network Designers
Session Organizer/Chair:
Jack L. Burbank, **William T. Kasch**, Johns Hopkins University, USA

Session Overview:
This forum provides an overview of modeling and simulation (M&S) tools and techniques available to assist network designers and developers. M&S is a critical element in the design, development, and test and evaluation (T&E) of any network product or solution. In many cases, M&S provides the only method to gain insight into the performance of the eventual product or solution in a large-scale environment, and allows for more informed design trade studies. The goal is to provide attendees an overview of many of the M&S tools and techniques that are available to assist them in their projects.

Description:
The forum would nominally consist of six presentations in the following areas relevant to M&S:

- Network M&S - This presentation would provide an overview of existing network M&S tools, such as OPNET, NS2, QualNet, and GloMoSim, contrasting the strengths and weaknesses.
- Hardware-in-the-loop M&S - This presentation would provide an overview of hardware-in-the- loop (HITL) M&S methods, describing the appropriate applications of HITL applications, and providing novel examples of HITL techniques.
- Distributed simulation - This presentation would provide an overview of distributed computing methods, and discuss the application of network M&S tools in a distributed environment in order to achieve high-powered M&S capabilities.
- Waveform M&S tools - This presentation would compare and contrast existing waveform M&S tools, such as MATLAB, SimuLink, and SPW.
- Propagation models - This presentation would compare and contrast existing propagation M&S tools, such as Wireless Insite.
- M&S development tools - This presentation would focus on the tools that assist in the development of M&S tools, such as software configu ration management (SCM) tools.

Tuesday, 29 November, 14:00-17:00
Security and Manageability in Handheld Devices
Session Organizer/Chair:
Robert Hasbun, Intel Corp., USA

Presenters:
Robert Hasbun, Intel Corp., USA
Security and Manageability In Handheld Devices: Overview
Tony Walters, Certicom, USA
Mobile Cryptography Needs, Now, And Future
Rakesh Kushwaha, mFormation
Mobile Management And Configuration
Luosheng Peng, CEO Innopath, USA
OTA Update Evolution In Mobile
Vincent Prunet, Mobile & Trusted Devices, USA
Trusted Execution In Mobile

Session Overview:
The requirements and impacts of security & manageability on the handset will be reviewed in depth from a platform perspective. Platform trust, HW vs SW implementations, how to address piracy, theft and malicious code, and the need for an inherently manageable platform will be explored in the context of a cellular client.

Description:
Many new services and handset capabilities are being offered to sub-scribers as competition for the subscriber's wallet continues to grow. These new services are driving an architectural shift from closed and proprietary handset architectures to architectures that are relatively open, interoperable, and updateable. New services such as music downloads, digital broadcasts, e-purchasing, and gaming have a common thread – they all require robust and coherent security on the handset. They also need the capability to remotely manage the handset to mitigate service costs, enable robust distribution, and ensure a quality experience for the user. The requirements and impacts of security and manageability on the handset will be reviewed in depth from a platform perspective. Platform trust, HW vs. SW implementations, how to address piracy, theft and malicious code, and the need for an inherently manageable platform will be explored in the context of a cellular client.

Wednesday, 30 November, 10:15-12:15 and
Wednesday, 30 November, 14:00-17:00
Ubiquitous Networks Design and Applications-I
Session Organizer/Chair:
Ryoichi Komiya, Multimedia University, Malaysia

Ubiquitous Networks Design and Applications-II

Description:
Telecommunication networks have been changing based on the key driving technologies. Telephone networks started its construction from middle of the 19th century and grown rapidly by the latest transmission and switching technologies. Telephone services are now covering all over the world. The advent of internet is mid 1980 but its growth is faster than telephone network. Internet has been supported by the universal protocol sets and personal computers. These ten years together with the Internet, the penetration of the mobile phone network has been quickly achieved and subscribers' population is now exceeding those of fixed line phone subscribers because of its terminal portability and international roaming capabilities. The Internet technologies and mobile phone technologies are already fused together so that mobile phone station set now becomes integrated telephone/computer network terminal. According to the various business and personal demands, integrated mobile telephone and computer networks have been growing as expected.
In the IEEE Communication Society, it is a good timing to seek the next prospective networks to be envisaged with mobile network technology, tiny communication terminals based on the simple communication protocols. This is the important introduction of this forum. Now users have specific terminals to communicate by telephone networks or Internet. But, in the Ubiquitous Networks, users sometimes are unconscious about the terminals because terminals are sometimes embedded in their list watch, shoes, caps, T-shirts and accessories which are normally used in our daily lives. In the IEEE Communication Society, there are similar terminologies have been used such as wireless sensor networks, embedded networks, nomadic networks and home area networks, however, the ubiquitous network would include all these networks and services. Therefore, the forum proposal of the ubiquitous networks design and service applications is one of the most important epoch making events from the view point of terminology, technology and service applications.

The topics to be covered by this forum are as below.
- History of telecommunication networks and services, telephone, mobile phone, internet, mobile internet
- Definition of the Ubiquitous Networks
- Supporting technologies for the Ubiquitous Networks
- Design methodologies of the ubiquitous networks
- Services to be provided by the Ubiquitous Networks
- Field trials of the Ubiquitous Networks in Japan, US and European countries
- Future ubiquitous networks design and service applications

Wednesday, 30 November, 10:30-12:15
Congestion Management in Packet Transport Networks
Session Organizer/Chair:
Jeremy Bicknell, Integrated Device Technology, Inc.

Description:
As packet transport technology and service provider industry practice converges on Ethernet access, one of the challenges to be met is the provision of a transport layer that can be used for both existing TCP/IP based traffic overlays as well as other existing and future applications that operate with low link utilization characteristics.

More and more, network equipment manufacturers are looking at Ethernet aggregation as a way to reduce the per-port cost of providing services. Intelligent oversubscription logic at the MAC layer allows processing costs to be distributed over a larger number of ports and with higher bandwidth utilization. However, care must be taken to ensure that only lower priority traffic gets affected by the inevitable periods of congestion.

These considerations are already well-know to chip designers and System architects and have prompted various ad-hoc and standard solutions to be proposed, so far with varying degrees of adoption. Such solutions generally involve schemes for first detecting congestion and then removing it by taking action based on an established traffic priority.

This forum examines state-of-the art hardware and a proposed update to Ethernet standards that promises to address congestion management head on.

Wednesday, 30 November, 14:00-17:00
Session Border Controller IP-IP Peering in VoIP Networks
Session Organizer/Chair:
Bernard Ku, SBC Laboratories, Inc., USA

Distinguished Experts:
Satish Parolkar, SBC Labs, USA
Why VoIP Carriers Need Session Border Controllers?
Bhimup Khasnabish, Verizon Labs, USA
Carriers' Requirements Of Session Border Controller
Duane Hobbs, Acme Packet, USA
Promises of Session Border Controller
Chien-shun Chu, Juniper/Kagoor Network, USA
Commercial Deployment of Session Border Controller

Description:
Session Border Controllers (S/BCs) have become an important network element of modern VoIP networks as service providers are focusing on protecting the integrity of the networks and business models while offering diverse services to their customers. S/BCs are being recommended for deployment in several network configurations to establish secure and quality Voice communications over IP networks. These could potentially be deployed between (1) an Enterprise and the Carrier network, or between (2) two Carrier Networks, or (3) a Carrier and an Applications Provider Network. However, the vendor developments are not consistent and lack the needed definition to allow interoperability between vendors.

S/BC deployment will require agreements on policies and procedures between carriers broadly in following areas: Service Reach, Security, Service Quality, Accounting, and Network Management.
Service Reach: To widen the service reach first and foremost peer networks need to agree on the signaling protocol used, secondly, on mechanism to locate subscribers in each others domains and thirdly, may require mechanisms to bridge calls between IP phones located in the private IP address space and the ones hosted on public IP address space.
Security: To ensure that security concerns of peer networks are met, agreements are needed on policies that help protect the VoIP infrastructure.
Service Quality: Service and Voice quality assurance requires agreements between peer networks on class of service definitions for interworking QoS and mechanisms to monitor the quality.
Accounting: Peer Networks need to agree on call details that need to be exchanged between network operators in a meaningful form for settlement

and revenue assurance purposes.
Network Management: Tools and procedures need to be identified to track faults across network boundaries.

This D&D forum aims to provide different perspective of the S/BC functions as viewed by service providers and vendors. The distinguished experts assembled for this panel will discuss their visions and new ideas and to identify which functions are the most important for deployment of S/BC to support future VoIP applications.

Thursday, 1 December, 10:30-12:15
Success Strategies for Customer-Premise-Based IP Telephony Solution
Session Organizer/Chair:
Wayne Crolley, AES Engineering, USA

Description:
This half-day forum discusses strategies and methodologies used in the design and deployment of customer premise-based IP Telephony solutions. Because of the paradigm shift created by the introduction of soft switches into businesses and complexities associated with this technology, challenges facing the design and deployment of these solutions require new and innovative strategies to ensure success.

Presentations will be made by multiple disciplines including Marketing, Consulting, Design Engineering, Project Management, Field Engineering, and Customer Support. Discussions will center around how each discipline associated with this type of solution uses Best Practices and Agile Methodologies in the delivery of these solutions with a holistic approach.

Thursday, 1 December, 14:00-17:00
Enhanced Services For The Converged Wi-Fi And Wireless Networks
Session Organizer/Chair:
Seshadri Mohan, University of Arkansas, USA

Description:
With revenue from voice services flattening or falling off, wireless and wireline carriers are seeking new revenues from enhanced services facilitated by the convergence taking place in the wi-fi and wireless arenas. The wireless carriers are attempting to deploy enhanced services involving voice, data, picture, video, multimedia, messaging, conferencing, and others. The emergence of new enhanced services over wireless networks, that have hitherto been possible only in limited cases, is now possible due to the confluence of four evolving arenas: the disparate wireless networks involving TDMA, CDMA, GSM, GPRS, EDGE, and 3G; new smart handsets with open OS (Symbian, Mobile 2003, Linux), enhanced full color displays, multiple radio interfaces including wi-fi and power of processors that are ever increasing approaching that of laptops; the evolution in middleware such as .Net, Java, web services; open standards and architectures being discussed and developed in standards bodies such as IETF, ITU, 3GPP, and 3GPP2 as well as industry consortia efforts such as Open Mobile Alliance (OMA) and Unlicensed Mobile Access (UMA). This panel will explore the various facets of convergence and new services that are now possible due to the multi-faceted evolution process sweeping the industry.

TELECOM BUSINESS FORUM

This forum will address important business management, market trends, and issues in the current and future global telecom business forum.

Tuesday, 29 November, 10:30-12:15
Network Communications: Access Issues
Session Organizer:
Dave Bailey, SBC, USA

This session discusses the role of access technologies in optimizing the costs and effectiveness of communications. The economic and strategic drivers behind MPLS VPNs, as well as the related impact of convergence will be presented. This discussion will include examples of operators who are offering hosted services, including IP Telephony, Security, and Internet. In addition, the panel will discuss demonstrated cost savings achieved by enterprises that have opted for these solutions.

Tuesday, 29 November, 14:00-15:45
Networks Communications: Wireless Issues
Session Organizer:
Dan Simone, Trapeze Networks, USA

This session discusses the role of wireless advances in increasing the productivity and mobility of enterprises. The economic and strategic drivers behind WiMax, as well as the related impact of IP telephony and video will be presented. This discussion will include examples of operators who are offering WiMax services and WiFi services security. In addition, the panel will discuss demonstrated cost savings achieved by enterprises that have opted for these solutions

Tuesday, 29 November, 16:00-17:45
Enterprise Communications: Security Issues
Session Organizer:
Karen Kimball, Nokia, USA

This session discusses the role of a mobility strategy in optimizing the costs and effectiveness of enterprise communications. The economic and strategic drivers behind enterprise mobility, as well as the related impact of convergence will be presented. This discussion will include examples of operators who are taking advantage of the enterprise opportunity by offering hosted solutions for wireless voice. In addition, the panel will discuss demonstrated cost savings in telephony costs achieved by enterprises that have opted for these solutions.

Wednesday, 30 November, 10:30-12:15
Enterprise Communications: Virtualization Issues

This session discusses the virtualization of enterprise IT stacks in optimizing the real-time and compliance related aspects of the enterprise. The economic and strategic drivers behind virtualization will be presented. This discussion will include enterprises who are implementing virtualization across the IT infrastructure. In addition, the panel will discuss demonstrated cost savings achieved by enterprises that have opted for these solutions.

Wednesday, 30 November, 14:00-15:45
Enterprise Communications: Data Issues
Presenter:
Bill Hayden, Edward Jones, USA

This session discusses the data synchronization aspects of the real-time infrastructure and active-active data centers. The economic and strategic drivers behind active-active data centers will be presented. This discussion will include enterprises who are implementing data synchronization across the IT infrastructure. In addition, the panel will discuss demonstrated cost savings achieved by enterprises that have opted for these solutions

Wednesday, 30 November, 16:00-17:45
Enterprise Communications: Security Issues
Presenter:
David Brussin, Symantic, USA

This session discusses the identity, access, and content management of enterprise IT stacks in securing the infrastructure aspects of the enterprise. The economic and strategic drivers behind enterprise security will be presented. This discussion will include enterprises that are implementing identity and access management, content filtering, and layered access solutions across the IT infrastructure. In addition, the panel will discuss demonstrated cost savings achieved by enterprises that have opted for these solutions.

Thursday, December 1, 10:30-12:15
Military Communications: Operational Issues

This session will address network-enabled military communications need to support joint and allied operations. Senior government and military leaders will present operational designs and address concerns.

Thursday, 1 December, 14:00-15:45
Military Communications: Systems Issues
Session Organizer and Chair:
William W. Schoening, The Boeing Company, USA

This session will present some of the successes and challenges in developing and delivering networked communications systems. Invited speakers from industry will present system architecture and design for high availability solutions.

Thursday, 1 December, 16:00-17:45
Military Communications: Research Issues
Session Organizer and Chair:
James Gantt, Murray State University, USA

This session will present emerging systems and technologies showcasing the state-of-the-art in military communications. Invited speakers from university and government labs will present research activities and describe recent advances.

TUTORIALS

Monday, 28 November and Friday 2 December

IEEE GLOBECOM 2005 is pleased to offer 1 full day and 11 half day tutorials covering a plethora of important or emerging communication topics. These in-dept sessions presented by invited industry experts have been specifically selected to compliment the IEEE GLOBECOM 2005 technical program. Session abstracts and Industry Biographies are available at www/ieeeglobecom2005.org. Separate registration fee required.

Monday, 28 November, 9:00-17:00
TU-01 - Synchronization for WCDMA
Presenters:
Ali Ghrayeb, **Mohamed El-Tarhuni**, American University Of Sharjah, UAE

Monday, 28 November, 9:00-17:00
TU-13 - Using the Open Network Laboratory
Presenter:
Jonathan Turner, Washington University, USA

Monday, 28 November, 9:00-12:00
TU-02 - Tracing Cyber Attacks
Presenter:
Nirwan Ansari, New Jersey Institute of Technology, USA

Monday, 28 November, 9:00-12:00
TU-03 - Advances in Wireless Local Area Networks
Presenter:
Benny Bing, Georgia Tech, USA

Monday, 28 November, 9:00-12:00
TU-04 - Business Aspects of Broadband Wireless Access Technologies
Presenter:
Riaz Esmailzadeh, Kei University, Japan

Monday, 28 November, 9:00-12:00
TU-05 - Next Generation SONET/SDH and OTN
Presenter:
Stamatios Kartalopoulos, University of Oklahoma, USA

Monday, 28 November, 14:00-17:00
TU-06 - Traffic Analysis for Network Security
Presenter:
Tom Chen, SMU, USA

Monday, 28 November, 14:00-17:00
TU-07 - IEEE Standards and Cellular-Based Broadband Wireless IP
Presenter:
Abbas Jamalipour, University of Sydney, Australia

Monday, 28 November, 14:00-17:00
TU-09 - DWDM Technologies in Communications
Presenter:
Stamatios Kartalopoulos, University of Oklahoma, USA

Monday, 28 November, 14:00-17:00
TU-10 - FT1.1 Synchronization of Digital Telecommunications Networks
Presenter:
Stefano Bregni, Politecnico di Milano, Italy

Friday, 2 December, 9:00-12:00
TU-08 - Fundamentals Limits of MIMO Channels
Presenter:
Andrea Goldsmith, Stanford University, USA
Syed Ali Jafar, University of California, USA
Nihar Jindal, University of Minnesota, USA
Sriram Vishwanath, University of Texas, USA

Friday, 2 December, 9:00-12:00
TU-11 - Infrastructure-Based Wireless Multihop Relay, Mesh Networks
Presenter:
Hami Yanikomeroglu, Carleton University, Canada

Friday, 2 December, 9:00-12:00
TU-12 - Availability-Based Service Provisioning in Optical Networks
Presenter:
Dominic A. Schupke, Siemens, Germany

Individuals attending the tutorials on Monday and Friday have the ability to earn up to 16 PDH's for use toward Professional Engineering licensure. The Professional Development Hours (PDH's) are offered, tracked and certified through the St. Louis Section of IEEE. Upon completion of each course, attendees will receive certificate sating the number of hours earned. Attendance will be retained to meet Illinois and Missouri Professional Engineering licensure requirements.

WORKSHOPS

Monday, 28 November and Friday, 2 December

Workshops will feature the presentation of papers relevant to their topic area and the IEEE GLOBECOM 2005 technical program. All workshops will have notes. The notes are included with the workshop registration fee. Copies can also be purchased with conference registration. In advance or on-site in St. Louis.

Monday, 28 November, 9:00-17:00
WO-1 - Second IEEE International Workshop on Adaptive Networks
Session Organizers:
Rajarathnam Chandramouli, Stevens Institute of Technology, **Sajal Das**, University Of Texas, USA

Friday, 2 December, 9:00-12:00
WO-3 - Optical Cross-Connects
Session Organizer:
Tarek El-Bawab, Alcatel

Friday, 2 December, 9:00-12:00
WO-4 - Advances in Satellite Communications: New Services and Systems
Session Organizers:
Sastri Kota, Harris Corporation, USA,
Giovanni Giambene, University of Siena, Italy

GLOBECOM STUDENT ACTIVITIES

Students are invited to participate in the technical and networking opportunities at IEEE GLOBECOM 2005. In particular, undergraduate and graduate students are served by a dedicated program which they can attend with a one-day registration. A student robotics event and reception will be held Tuesday evening and a student-only poster session will be held Wednesday morning. Robotics students and top student posters will be recognized at the Wednesday banquet. Contact Sean Bentley (Adelphi University) for more details s.j.bentley@ieee.org.

TECHNICAL SESSIONS

IEEE GLOBECOM 2005 will offer a plethora of programming for the communications engineer. There are 8 technical symposia in the addition to the tutorials and workshops, Design & Developers Forum, Telecom Business Forum, and a Student Program. The papers for the technical symposia are divided into 125 oral presentation sessions and 6 poster presentation sessions. All papers received at least three reviews from our international community and all accepted papers, both for oral and poster presentation, will be published in the conference proceedings. I congratulate the symposia chairs and vice-chairs, their technical committees, and the reviewers for their significant contributions to the technical program.- Technical Program Chair, Dr. Steve E. Watkins, University of Missouri, St. Louis, Missouri, USA

GENERAL CONFERENCE:

Chair: Boon Sain Yeo, Institute of Infocomm Research, Singapore
Vice-Chairs: Stefano Bregni, Politecnico di Milano, Italy
              Yuming Jiang, Norwegian University, Norway
20 Oral Presentation Sessions and 1 Poster Session

T1.1 Sensor Networks I	W2.1 Resource Management & Flow Control	R1.1 Digital Communications
T2.1 Sensor Networks II	W1.2 IP Networks	R2.1 Load Balancing & Resource Fairness
T1.2 Cellular Systems	W2.2 Optical Communications	R1.2 Internet & Security
T2.2 MIMO & OFDM	W14.2 Coding & Decoding	R2.2 Switches
T1.3 Wireless Networks (WiFi & WiMaX)	W1.3 Wireless Communications	R1.3 Traffic Engineering
T2.3 TCP	W2.3 Wireless Networks I	R2.3 Optical Networks & Wireless Networks II
TP.2 General Conference Poster	W14.3 Congestion & Admission Control & Scheduling	
W1.1 Applic.-Video & Speech		

SIGNAL PROCESSING FOR COMMUNICATIONS:

Chair: Jerome Knopp, University of Missouri-Kansas City, USA
Vice-Chair: Jing Tiffany Li, Lehigh University, USA
11 Oral Presentation Sessions and 1 Poster Session

T3.1 Equalization	W3.1 SP for OFDM Systems	R3.1 SP & Coding
T3.2 Multimedia Systems	W14.1 SP for CDMA Systems	R14.1 Communication SP II
T3.3 Channel Estimation	W3.2 Communication SP I	R3.2 SP for Algorithms
TP.2 Signal Processing Poster	W3.3 SP for MIMO Systems	R3.3 SP for Wireless Systems

WIRELESS COMMUNICATIONS:

Chair: Abbas Jamalipour, Univ. of Sydney, Australia
Vice-Chairs: Nirwan Ansari, New Jersey Inst. of Technology, USA
              Chengshan Xiao, Univ. of Missouri-Columbia, USA
              Mostofa Howlader, Univ. of Tennessee, USA
47 Oral Presentation Sessions and 2 Poster Sessions

WIRELESS NETWORK AND TRANSPORT TRACK:

T4.1 Ad Hoc Networks I	T5.3 Cellular Networks III	W13.2 Satellite Networks
T5.1 Cellular Networks I	W4.1 Sensor Networks I	W4.3 Sensor Networks III
T4.2 Ad Hoc Networks II	W5.1 Wireless LAN I	W5.3 Wireless LAN III
T5.2 Cellular Networks II	W4.2 Sensor Networks II	R4.1 Wireless Internet I
T4.3 Ad Hoc Networks III	W5.2 Wireless LAN II	R4.2 Wireless Internet II
		R4.3 Wireless Internet III

WIRELESS SERVICES & APPLICATIONS TRACK:

T6.1 Wireless LAN Services	T6.3 Topics in Mobile Internet
T6.2 Applications of Ad Hoc & Sensor Networks	T13.3 Wireless Network Services

WIRELESS AIR INTERFACE & LINK CONTROL TRACK:

R13.1 UWB I	T7.3 ORDM III	W7.3 Ad Hoc & Wireless Networks III
R7.2 Performance Analysis I	T10.3 MIMO III	W10.3 CDMA II
R7.3 Performance Analysis II	W6.1 Space-Time Coding I	R5.1 Interference Cancellation
R10.2 UWB II	W7.1 Ad Hoc & Wireless Networks I	R6.1 Recent Advances I
R10.3 MIMO-OFDM	W13.1 MIMO IV	R7.1 Ad Hoc & Wireless Networks IV
T7.1 OFDM I	W6.2 Space-Time Coding II	R5.2 Queuing & Scheduling
T13.1 MIMO I	W7.2 Ad Hoc & Wireless Networks II	R6.2 Recent Advances II
T7.2 OFDM II	W10.2 CDMA I	R5.3 Resource Management & Allocation
T10.2 MIMO II	W6.3 Space-Time Coding III	R6.3 Recent Advances III

WIRELESS COMMUNICATIONS POSTER TRACK:

TP.1 Wireless Communications Poster I   RP.1 Wireless Communications Poster II

COMMUNICATION THEORY:

Chair: Chintha Tellambura, Univ. of Alberta, Canada
Vice-Chair: Sarah Kate Wilson, Royal Inst. of Techn., Sweden
16 Oral Presentation Sessions and 1 Poster Session

T8.1 Advances in LDPC Codes	W8.1 Turbo Coding	R8.1 CDMA
T14.1 Cooperative Networks	W8.2 OFDM I	R8.2 CDMA Receiver Structures
T8.2 Decoding Methods for LDPC Codes	W9.2 MIMO I	R9.2 Space-Time Codes
T9.2 Performance Analysis	W8.3 OFDM II	R8.3 Receiver Design
T8.3 LDPC Applications	W9.3 MIMO II	R9.3 Differential Space-Time Codes
T9.3 Higher Level Protocols	WP.1 Communication Theory Poster	

ADVANCES FOR NETWORKS AND INTERNET:

Chair: John Lockwood, Washington Univ., USA
Vice-Chairs: George Kesidis, Penn. State Univ., USA,
       Changcheng Huang, Carleton Univ., Canada
8 Oral Presentation Sessions and 1 Poster Session

T9.1 Overlays, Peer to Peer	W11.3 Routing	R11.3 Congestion Control
T11.3 Multicast, Multimedia	R9.1 Network Processing	R14.3 Quality of Service
W9.1 Scheduling	R14.2 MPLS, VPN	RP.2 Advances for Networks & Internet Poster

AUTONOMIC NETWORKS:

Chair: Marco Ajmone Marsan, Politecnico di Torino, Italy
Vice-Chairs: Marcus Brunner, NEC, Germany
       Wanjiun Liao, National Taiwan University, Taiwan
       Claudio Casetti, Politecnico di Torino, Italy
8 Oral Presentation Sessions and 1 Poster Session

T9.1 Overlays, Peer to Peer	W11.3 Routing	R11.3 Congestion Control
T11.3 Multicast, Multimedia	R9.1 Network Processing	R14.3 Quality of Service
W9.1 Scheduling	R14.2 MPLS, VPN	RP.2 Advances for Networks & Internet Poster

PHOTONIC TECHNOLOGIES FOR COMMUNICATIONS:

Chair: Ioannis Tomkos, Athens Info. Tech. Center
Vice-Chair: Jason Jue, Univ. of Texas at Dallas, USA
8 Oral Presentation Sessions and 1 Poster Session

T11.1 Survivability & Reliability I	T13.3 Multicasting & Light Trails	WP.2 Photonics Technologies Poster
T11.2 Survivability & Reliability II	W11.1 OBS/OPS Networks I	R11.1 WDM Optical Networks
T13.2 Access & CDMA	W11.2 OBS/OPS Networks II	R11.2 Traffic Grooming

COMPUTER AND NETWORK SECURITY:

Chair: Mohsen Guizani, Western Michigan Univ., USA
Vice-Chair: Hsiao-Hwa Chen, National Sun Yat-Sen Univ., Taiwan
7 Oral Presentation Sessions and 1 Poster Session

T12.1 Computer & Network Security I	W12.2 Computer & Network Security IV	R12.2 Computer & Network Security VI
T12.2 Computer & Network Security II	WP.2 Computer & Network Security Poster	R13.2 Computer & Network Security VII
W12.1 Computer & Network Security III	R12.1 Computer & Network Security V	

SOCIAL EVENTS

IEEE GLOBECOM 2005 Welcome Reception

Monday, 28 November, 18:00 - 21:00
The entire IEEE GLOBECOM 2005 Committee welcomes you to St. Louis. Join us as we kick off the conference.
This event is included with conference registration. Accompanying guests are welcome to attend.

IEEE Communications Society Awards Luncheon

Tuesday, 29 November, 12:30
Celebrate with your colleagues at this biannual event honoring the achievements of IEEE and IEEE Communications Society Members.
These events are included with Full conference registration. Tickets can be purchased for $65 per person for other registration categories and guests.

Social Evening

Tuesday, 29 November, 16:30
Bissell Mansion, "It's a Wonderful Death" 16:30
A parody of Frank Capra's classic "It's a Wonderful Life". In this version the cantankerous Mr. Potter is found murdered, but there are so many suspects in Bedford Falls, the culprit is difficult to find.
Extra registration fee of $60.00 per person is required. Fee includes dinner and transportation. Cash bar will be available.

Conference Banquet

Wednesday, 30 November, 19:30
Join GLOBECOM 2005 General Chair, Ann Miller for a relaxing evening of fine dining and entertainment. Catch up with old friends and spend time with the new ones you have made.

FEATURED SPEAKER:
Jeffrey M. Jaffe, President of Bell Labs Research and Advanced Technologies for Lucent Technologies

As President of Bell Labs Research, Dr. Jaffe supports basic research to advance science and technology in areas of importance to Lucent. Advanced Technologies works with Lucent's business units in the commercial development and deployment of new technologies.
Prior to joining Lucent in 2000, Dr. Jaffe held a variety of executive research positions with International Business Machines (IBM) in a 20-year career, which included Research Vice President of Systems and Software and Corporate Vice President of Technology. Dr. Jaffe is a fellow of the IEEE and the Association of Computing Machinery. In 1997, President Clinton appointed Dr. Jaffe to the Advisory Committee for the President's Commission for Critical Infrastructure Protection. Dr. Jaffe has chaired the Chief Technology Officer Group of the Computer Systems Policy Project (CSPP), and has served on The National Research Council's Computer Science & Telecommunications Board. Dr. Jaffe earned his Bachelor of Science in Mathematics, a Masters of Science in Electrical Engineering and a Ph.D. in Computer Science from the Massachusetts Institute of Technology.

THIS EVENT IS INCLUDED WITH FULL CONFERENCE REGISTRATION
Tickets can be purchased for $100 per person for other registration categories and Accompanying Guests.

TOURS

SPOUSE/GUEST TOURS
Tuesday, 29 November
Anheuser-Busch Brewery, Riverboat Cruise & Gateway Arch
9:00 to 16:00 • Cost: $75.00
Includes Anheuser-Busch brewery tour, one-hour sightseeing cruise with box lunch, St. Louis overview and tram or movie admission to the Gateway Arch.

FOREST PARK - "Meet Me In St. Louis"
Wednesday, 30 November
9:00 to 15:00 • Cost: $60.00
Includes Forest Park overview with a stop at the Science Center, lunch at The Boathouse and tour of the New Cathedral.

HISTORIC ST. CHARLES, MISSOURI - From Past to Present
Thursday, 1 December
9:00 to 15:00 • Cost: $65.00
Includes an overview of St. Charles with a stop at the Interpretive Center & Boathouse. Lunch at Lewis & Clark's American Restaurant and time to shop on Main Street.

POST CONFERENCE TOUR- Culinary Delights
Saturday, 3 December
9:00 to 15:00 • Cost: $90.00
This tour includes stops at Historic Soulard Farmer's Market, Gus' Pretzel, Volpi Sausage, Viviano's Grocer, lunch at Favazza's and dessert at Ted Drewes.

SIGN UP FOR THESE TOURS EARLY SPACE IS LIMITED AND WE DON'T WANT YOU TO MISS OUT!

REGISTER NOW AT www.ieee-globecom.org/2005!

ABOUT ST. LOUIS

St. Louis is known around the world for its collection of fascinating attractions, great restaurants and exciting blues music and nightlife. The list of ways to experience St. Louis is endless. Use the list of links to find St. Louis information. For a more detailed list of St. Louis entertainment, view these website below:

www.stlouis.missouri.org   www.stlzoo.org   www.stlouisarch.com
www.explorestlouis.com   www.stlouisrams.com   www.slsc.org
www.slam.org   www.stlouisblues.com/index.html

A MetroLink Station is 2 blocks away. St.Louis' light rail system, MetroLink (www.metrostlouis.org), has been called one of the best mass transit systems in the country. Tickets from the airport station to downtown St. Louis cost $3. Trains run every 10 minutes during the day. Early morning and late night service runs every 30 minutes.

HOTEL INFORMATION

The Renaissance Grand Hotel makes a grand impression — the appeal of a luxury hotel with experiences rich in history showcased in its magnificent architecture. Located adjacent to America's Center, the hotel offers the ambience and grandeur of a bygone era, awaking your senses with an expressive, timeless and inviting sense of arrival, while providing meeting, business and leisure travelers everything they need for a comfortable and memorable stay.

Located adjacent to convention center. 15 minutes from Lambert International Airport Convenient to downtown attractions, businesses and restaurants.

Renaissance Grand Hotel
800 Washington Avenue, St. Louis, MO 63101, USA
Phone Number: +1-314-621-9600 / Fax: +1 314-621-9601
International Toll-Free: +1-800-468-3571 (toll free in the US & Canada)

IEEE GLOBECOM 2005 Sleeping Room Rate:
Single/Double: $135.00 (+14.866% sales and room tax)

To Make Reservations:
On-line in the hotel section of the IEEE GLOBECOM 2005 Web site www.ieee-globecom.org/2005

IMPORTANT NOTICE:
The IEEE Communications Society has a contractual obligation to fill a guaranteed block of rooms at the Renaissance Grand Hotel. Significant financial penalties will be assessed the Society should IEEE GLOBECOM 2005 fall short of the expected number of guest rooms committed. By staying at the Renaissance Grand Hotel, you'll enjoy the convenience of residing at the conference venue and to a far greater extent, provide valued assistance in support of IEEE ComSoc's financial obligations.

IEEE GLOBECOM 2005 EXHIBITORS as of August, 2005

- SPRINGER
- CAMBRIDGE UNIVERSITY PRESS
- SCOTT - ST. LOUIS CHAPTER OF AFCEA
- JOHN WILEY AND SONS
- MORGAN KAUFMANM
- ELSEVIER

- ICC 2006
- ICC 2007
- GLOBECOM 2006
- GLOBECOM 2007
- IEEE COMMUNICATIONS SOCIETY
- IEEE REGION 5

For more information on exhibiting at IEEE GLOBECOM 2005, please contact bob@becnel.com.

IEEE GLOBECOM 2005
St. Louis Missouri, USA • 28 November – 2 December 2005
CONFERENCE REGISTRATION FORM

1 Please Print or Type

Name: _____
    Prof./Dr./Mr./Ms./Mrs.   Last Name   First Name

Preferred Name on Badge/Nickname: _____

Company/Organization: _____

Title/Position: _____   E-mail: _____
                                                    (required for confirmation)

Mailing Address: _____
                Street/PO Box

_____
City   Province/State   Country   Postal/Zip

Telephone: (   ) _____   Fax: (   ) _____

Accompanying Guest : _____
(for name badge only)   Last Name   First Name   Badge/Nickname

Members of IEEE and the following ComSoc Sister Societies may register at the MEMBER rate:
Please enter your membership number in the space provided. If you are a member of an IEEE sister society, please check off below.
❑AEIT ❑CCIS ❑CIC ❑CIE ❑CIEE ❑EZS ❑HTE ❑IEICE ❑IETE ❑KICS ❑LITTA ❑POPOV ❑REV ❑SEE ❑SBrT ❑SR ❑VDE
Membership Number _____

I am registering as: (check all that apply):
  ❑ A Technical Paper Presenter ❑ A Technical Paper Author ❑ A Workshop Paper Author/Presenter ❑ A Technical Session Chair
  ❑ A Design & Developers/Telecom Business Forum Speaker/Organizer ❑ A Tutorial Presenter

My primary interest is (check one)   ❑ IEEE Globecom 2005 ❑ Design & Developers Forum
  ❑ Telecom Business Forum
How did you hear about IEEE GLOBECOM 2005? (Check one) ❑ Advance Program
  ❑ Web Site ❑ Colleague ❑ E-Mail ❑ Other _____
I have special needs (please check & attach description): ❑ access ❑ audio ❑ visual
  ❑ vegetarian ❑ Other _____
Organizational Status: ❑ Industry ❑ Academia ❑ R&D ❑ Government ❑ Other _____

REGISTRATION FEES - All attendees must be registered. Select one of RG01-RG013.

> **Full registration (RG-01, RG-03, RG-05, RG-10) includes:**
> Welcome Reception, Plenary, Technical Sessions, D & D Forum, Telecom Business Forum, Awards Luncheon, Conference Banquet and CD-ROM Record
> **Accompanying Guest Includes:**
> Welcome Reception, Guest Hospitality Suite and Ability to Purchase Tour and Social Event Tickets
> **Tutorial/Workshop Only Includes:**
> Welcome Reception, entrance to the Tutorial/Workshop(s) registered for and the notes or proceedings for those sessions
> **All Other Registration Includes:**
> Welcome Reception, Plenary, Technical Sessions, D & D Business Forum, Telecom Business Forum and CD-ROM.

2 **TECHNICAL PAPER PRESENTER REGISTRATION (On/By 1 September, 2005)**

NEW IEEE/COMSOC POLICY: All IEEE Globecom 2005 technical paper presenters must register at the FULL or LIMITED rate. For authors presenting multiple papers, one FULL or LIMITED registration is valid for up to three papers.

RG-01 - **PRESENTER** - FULL MEMBER	$700	$_____
RG-02 - **PRESENTER** - LIMITED MEMBER	$550	$_____
RG-03 - **PRESENTER** - FULL/NON-MEMBER	$950	$_____
RG-04 - **PRESENTER** - LIMITED NON-MEMBER	$800	$_____

ATTENDEE MEMBER REGISTRATIONS	On/By 31 October	After 31 October	
RG-05 - FULL **MEMBER**	$700	$810	$_____
RG-06 - LIMITED **MEMBER**	$550	$660	$_____
RG-07 - 1 DAY **MEMBER** (*TUE WED THU* CIRCLE DAY)	$390	$470	$_____
RG-08 - LIFE **MEMBER**	$25	$25	$_____
RG-09 - STUDENT **MEMBER** (FULL TIME STUDENTS ONLY)	$200	$250	$_____
RG-13 - TUTORIAL/WORKSHOP ONLY ❑	NA	NA	

ATTENDEE NON-MEMBER REGISTRATIONS	On/By 31 October	After 31 October	
RG-10 FULL **NON-MEMBER**	$950	$1,110	$_____
RG-11 LIMITED **NON-MEMBER**	$800	$960	$_____
RG-12 **1-DAY NON-MEMBER** (*TUE WED THU* CIRCLE DAY)	$570	$680	$_____
RG-13 TUTORIAL/WORKSHOP ONLY	NA	NA	

TOTAL REGISTRATION: $_____

Name: _____

3 TUTORIALS & WORKSHOPS

Tutorials and Workshops will be held if there is a sufficient number of registered participants. If a Tutorial or Workshop is cancelled, liability of IEEE Globecom 2005 is limited to the registration fee itself.
Liability due to the cancellation of a Tutorial or Workshop is limited to the Tutorial or Workshop registration fee. Please select all Tutorials & Workshops that you plan to attend. Select only one for each time slot.

TUTORIALS

MONDAY - FULL DAY TUTORIAL
❒ Tu01 Synchronization for WCDMA
❒ Tu13 Using the Open Network Laboratory

MONDAY - MORNING HALF DAY TUTORIALS
❒ TU02 Tracing Cyber Attacks
❒ TU03 Advances in Wireless Local Area Networks
❒ TU04 Business Aspects of Broadband Wireless Access Technologies
❒ TU05 Next Generation SONET/SDH and OTN

MONDAY AFTERNOON HALF DAY TUTORIALS
❒ TU06 Traffic Analysis for Wireless Network Security
❒ TU07 IEEE Standards and Cellular Based Broadband Wireless IP
❒ TU09 DWDM Technologies in Communications
❒ TU10 Synchronization of Digital Telecommunications Networks

FRIDAY MORNING HALF DAY TUTORIAL
❒ TU08 Fundamental Limits of MIMO Channels
❒ TU11 Infrastructure-based Wireless Multihop, Relay, Mesh Networks
❒ TU12 Availability-based Service Provisioning in Optical Networks

WORKSHOP REGISTRATION (includes notes)

MONDAY (FULL DAY) WORKSHOP
❒ W01 2nd IEEE International Workshop on Adaptive Networks

FRIDAY MORNING HALF DAY WORKSHOP
❒ W03 Optical Cross-Connects
❒ W04 Advances in Satellite Communications: New Services and Systems

TUTORIAL REGISTRATION (includes Notes)

		On/By 31 October	After 31 October		
TU-FD	FULL DAY	$350	$425	_____	$_____
TU-HD	HALF DAY	$200	$275	_____	$_____

WORKSHOP REGISTRATION (includes Proceedings)

		On/By 31 October	After 31 October		
WK-FD	FULL DAY	$350	$475	_____	$_____
WK-HD	HALF DAY	$200	$275	_____	$_____

TOTAL TUTORIALS & WORKSHOPS: $_____

TELECOM BUSINESS FORUM - please indicate your interest in attending

TUESDAY
❒ TB1-Network Communications: Access Issues (AM)
❒ TB2-Network Communications: Wireless Issues (PM)
❒ TB3-Enterprise Communications: Security Issues (PM)

WEDNESDAY
❒ TB4-Enterprise Communications: Virtualization Issues (AM)
❒ TB5-Enterprise Communications: Data Issues (PM)
❒ TB6-Enterprise Communications: Security Issues (PM)

THURSDAY
❒ TB7-Military Communications: Operational Issues (AM)
❒ TB8-Military Communications: Systems Issues (PM)
❒ TB9-Military Communications: Research Issues (PM)

DESIGN AND DEVELOPERS FORUM - please indicate your interest in attending

TUESDAY
❒ DD1-Modeling and Simulation Tools for Network Designers (AM)
❒ DD2-Security and Manageability in Handheld Devices (PM)

WEDNESDAY
❒ DD3-Ubiquitous Network Design and Applications-I (AM)
❒ DD4-Congestion Management in Packet Transport Networks (AM)
❒ DD5-Ubiquitous Network Design and Applications-II (PM)
❒ DD6-Session Border Controller for IP-IP Peering in VoIP

THURSDAY
❒ DD7-Success Strategies for Customer-Premise Based IP Telephony Solutions (AM)
❒ DD8-Enhanced Services for the Converged Wi-Fi and Wireless Networks (PM)

4 EXTRA ITEMS

		Per Item	QTY	
EX-01	Awards Luncheon	$65	_____	$_____
EX-02	Conference Banquet	$100	_____	$_____
EX-03	Additional Conference Record – CD-ROM	$50	_____	$_____
EX-04	Social Event – Bissell Mansion	$60	_____	$_____
EX-06	Post Conference Tour: Culinary Delights	$90	_____	$_____

TOTAL EXTRA ITEMS: $_____

5 OPTIONAL TOURS

		Per Person	QTY	
OT-01	Anheuser-Busch Brewery	$75	_____	$_____
OT-02	Forest Park	$60	_____	$_____
OT-03	Historic St. Charles	$65	_____	$_____

TOTAL OPTIONAL TOURS: $_____

PAYMENT (in U.S. Dollars)

2 Registration Fees $_____   3 Tutorials & Workshops $_____   4 Extra Items $_____   5 Optional Tours $_____

(Wire Transfer Info: Please E-mail globecom2005@ieee.org for wire transfer information.)

TOTAL REMITTANCE: $_____

PAYMENT METHOD Please Check One   ❒ Visa   ❒ Mastercard   ❒ American Express   ❒ Discover   ❒ Check, Bank Draft or Money Order
(make payable to IEEE Globecom 2005)

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I authorize IEEE/GLOBECOM 2005 to charge my credit card for the full amount in total remittance in U.S. Dollars, converted to my country's currency

IMPORTANT: Cancellations on or prior to October 31, 2005 will incur a $100.00 administrative fee. Please submit cancellation requests in writing to IEEE GLOBECOM 2005 to the address below. No refund will be issued after October 31, 2005.

QUESTIONS: IEEE GLOBECOM 2005 Conference Management Services - 445 Hoes Lane, Piscataway, NJ 08854, Fax: +1 (732) 465-6447, E-mail: globecom2005reg@ieee.org, Phone: +1 (800) 810-4333 (in the US or Canada only) or +1 (732) 981-3415 (outside US or Canada) Registrations will not be taken by phone.

DISCOVERY PAST AND FUTURE

IEEE GLOBECOM 2005

28 November – 2 December 2005
St. Louis, Missouri, USA

REGISTRATION INCLUDES

- 3 Plenary Keynotes
- 3rd Annual Design & Developers Forum
- Telecom Business Forum
- Over 750 Technical Papers
- Exhibits & Internet Café
- Welcome Reception
- Conference Proceedings on CD-ROM
- Networking Opportunities
- Student Program

PLUS

- 12 Tutorials
- 3 Workshops
- Optional Tours and Social Events at an additional cost

REGISTER NOW!

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