



## IEEE ICC 2012 Industry Forums Call for Initial Presentation Proposals

<http://www.ieee-icc.org/2012/cfp.html>

We are calling for presentation proposal participation in the **ICC 2012 Industry Forums**. There are three broad topics that are the focus of the conference industry forums:

- 1) Infrastructure;
- 2) Middleware and Management;
- 3) Services and Applications.

Proposed presentations should fall into these broad categories and be identified with one of the topics listed below or additional topics to be designated by the submission.

Infrastructure	Middleware & Management	Services & Applications
1.1 Wireless Evolution	2.1 Network Convergence	3.1 Application Frameworks
1.2 Wired Broadband	2.2 Policy & Control	3.2 Service Management
1.3 Device Ecosystems	2.3 Online Charging	3.3 Healthcare
1.4 Cloud Communications & Networking	2.4 Identity Management	3.4 Hospitality
	2.5 IPTV	3.5 Government and Defense
	2.6 Content Delivery	3.6 Energy Management

The duration of each forum is **105 minutes** with a moderator and 3-4 speakers of technical and/or Industry expertise in the featured topical area. After all the speakers have presented, a Q&A discussion will follow.

For submission, please send the initial version of the presentation which includes the following information:

- Title for the proposed presentation and the Category/Topic
- Name, affiliation, and email address of the speaker
- A brief biography of the speaker
- An abstract
- Outline and Content of the presentation (Draft)

The preferred file format is ppt or pdf.

Proposals of **Tutorials** and **Workshops** on these topics are also welcome. Please contact the Industry Forum Chairs Adam Drobot and Chi-Ming Chen with your proposal.

### Important Dates

- Initial presentation proposal submission deadline: **15 December, 2011**
- Acceptance notification: **30 January, 2012**
- Final presentation submission: **1 May, 2012**
- Industry Forum dates: **12-14 June, 2012**

Please send your proposal to the ICC 2012 Industry Forum Chairs: Adam Drobot (Adam.Drobot@gmail.com) and Chi-Ming Chen ([chimingchen@att.com](mailto:chimingchen@att.com)).



## Topics of Industry Forums

Click on any of the following topics below to read the related abstract:

Infrastructure	Middleware & Management	Services & Applications
<a href="#">1.1 Wireless Evolution</a> <a href="#">1.2 Wired Broadband</a> <a href="#">1.3 Device Ecosystems</a> <a href="#">1.4 Cloud Communications &amp; Networking</a>	<a href="#">2.1 Network Convergence</a> <a href="#">2.2 Policy &amp; Control</a> <a href="#">2.3 Online Charging</a> <a href="#">2.4 Identity Management</a> <a href="#">2.5 IPTV</a> <a href="#">2.6 Content Delivery</a>	<a href="#">3.1 Application Frameworks</a> <a href="#">3.2 Service Management</a> <a href="#">3.3 Healthcare</a> <a href="#">3.4 Hospitality</a> <a href="#">3.5 Government and Defence</a> <a href="#">3.6 Energy Management</a>

## 1. INFRASTRUCTURE TRACK

### 1.1 Wireless Evolution

Evolving wireless and wireline traffic patterns are affecting network economics and influencing future network architecture and design. Operators will increasingly invest in mobile data networking while enabling convergence with wireline. In an era of mounting data-intensive traffic, service providers must continue to embrace multiple strategies to meet the challenges of the data flood era while reducing costs. Discussion topics could include new architectural designs to address the following areas:

- LTE Advanced
- Spectrum use and re-farming
- Indoor coverage and small cells
- Backhaul and transport
- Network sharing
- HSPA to LTE network transformation and supporting IP and optical transport network infrastructure
- LTE IP SLA and QoS,
- Cell site aggregation and consolidated cell site transport requirements
- SON (self organizing networks) in a multivendor scenario; SON in a shared network scenario; eextension of SON tools and functions to 'legacy' networks

### 1.2 Wired Broadband

With today's explosion of broadband traffic driven by peoples need for instant access to information, communications service providers are rethinking their network infrastructure to support new technologies and applications. Always-on connectivity and bandwidth-intensive business, lifestyle and entertainment services are challenging traditional networks and driving profound changes in enterprises and broadband networks. Discussion topics in this track could include the following,

#### IP/Optical Core

- **Next Generation IP:** At its most basic, Internet Protocol (IP) is a numbering scheme. Customers require an IP address to connect to the Internet. Current IPv4 numbering scheme has run out of numbers at the global level. IPv6 is the protocol conceived to replace IPv4. Discuss considerations in IPv6 enablement and transition.
- **Maximizing our Fiber with Optical Advances:** Optical fibers can seemingly carry unlimited amounts of bandwidth. However, the capacity of optical fibers at any point in time is determined by the state of technology. Discussion topics in this track could include delving into how the information carrying capacity of fiber has increased over time and what can be carried today. It will also look at developments over the horizon that will help to push out the longevity of our fiber plant.

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- **Benefits of using Layer 2 features on Optical Transport:** Service providers continue on the journey to push innovative IP enabled services to the edge of the network. As this push enters less populated regions and areas that are resource constrained (power, space, fiber) the problem of how to transport

these services in a cost-effective manner becomes critical. Discussion topics in this track could focus on new packet/optical architectures that involve the use of feature rich layer 2 capabilities integrated into optical transport elements and how it can solve this problem.

- **FTTH Evolution:** Discussions about PON technology, followed by an examination of the evolution path from GPON to 10G PON, and beyond.
- **LTE Transport requirements:** LTE technology deployments require support from the IP and optical transport network infrastructure. Topics could include the HSPA to LTE network transformation, LTE IP SLA and QoS, cell site aggregation and consolidated cell site transport requirements, and LTE EPC transport.

#### Wireline Access

- **The future of alternative in-home wiring technologies:** review the present and evolving technologies using to distribute multiple HD Streams throughout the home and focus on future technologies including G.hn and 802.11n MIMO.
- **Key enablers to getting more out of DSL investments:** Discussion about technologies that enable network service providers get more value out of their DSL investments.
- **Leveraging broadband build infrastructures** (e.g. VDSL2)

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### 1.3 Device Ecosystems

- Special Purpose Networking: e.g. Underwater networks, vehicular communications, and medical networking
- Networked Gaming

### 1.4 Cloud Communications & Networking

As users of applications and contents become increasing mobile and more enterprises of various sizes carry out their businesses overseas in a global economy, the ability for service providers to deliver consistent quality of experience to its business and consumer clients at competitive prices becomes paramount. This will require that they explore the technological benefits of Cloud Computing & Federation for the effective and efficient delivery of applications, contents and services to its clients across and beyond its own information and communication infrastructures for reaching users at home and aboard. Discussion topics in this track could include the following,

- CCN covers IaaS, PaaS, SaaS (infrastructure, platform and software application as a service)
- Explore revenue potential in extending the Service Delivery Framework (SDF) to allow OTT providers to provide enhanced services
- Business to business to consumer (B2B2C) model
- Cloud interconnect industry standard developments
- Network aspects of Cloud Computing

## 2. MIDDLEWARE & MANAGEMENT

### 2.1 Network Convergence

The global explosion of data services and traffic that transformed wireline networks is now occurring for wireless operators. This trend is intensified for both wireline and wireless operators by the changing usage patterns of young end users, who often prefer data services, such as instant messaging, to voice services. In an era of mounting data intensive traffic, service providers must continue to embrace multiple strategies to meet the challenges of the data flood era while reducing costs. Discussion topics in this track could include the following,

- Next generation networks
- Future Internet
- Cooperative Networks and other special topics in Cognitive Networking

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- Autonomic Networking, Complex and Self-\* Networks
- Spectrum use and re-farming
- Indoor coverage and small cells
- Backhaul and transport
- Network sharing
- Fixed / Mobile convergence. Increasingly customers are seeking the ability to lever mobile networks to support fixed services to converge their fixed mobile experience. Either through apps (UC, SDF, etc), or simply by using the mobile network for temporary connectivity (IP resiliency, cellular backup or modems).

## 2.2 Policy & Control

In an era of mounting data intensive traffic, service providers must continue to embrace multiple strategies to meet the challenges of the data flood era while reducing costs. They face many challenges in handling of customer traffic in this era of – assuring a good experience for premium services, controlling applications and users that use disproportionate resources, providing different experiences for customers who buy different services, dealing with security threats, and the like. Policy control will play an increasingly important role in managing traffic growth and avoiding congestion, they can be defined at the network, device, user, and application level. Discussion topics in this track could include the following,

- Congestion Management
- Demand shaping
- Tiered services
- Personalized offerings
- New service models
- Fair usage and quota management
- Intelligent offloading
- Lower costs
- Network-based security capabilities
- Regulatory requirements

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## 2.3 Online Charging

An Online Charging System (OCS) calculates the costs associated with usage in the path of service and adjusts account balances as this happens. Discussion topics in this track could include the following,

- How an OCS is essential to service providers to enable pricing flexibility and support new business models.
- How service providers are moving from a device centric model to a user centric identity model.

## 2.4 Identity Management

Who are you? Service providers are migrating user logins to Single Sign-On (SSO) and Single Credentials (SC) to make it easier for subscribers to use and manage their services. Discuss how service providers are moving from a device centric model to a user centric identity model.

- Context awareness and personalization

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## 2.5 IPTV

- **Multi-screen IPTV: Enabling Technologies and Challenges:** Advanced digital video compression and distribution technology, as well as high throughput wireless and wired Internet access are allowing video to be enjoyed on other innovative consumer electronic devices. With the target to extend “walled garden” IPTV to these screens, multi-screen IPTV allows subscribers to consume purchased content anytime, anywhere, and on any device.
- **IPTV applications development ecosystem:** Never more than now is there a need to establish an ecosystem for the development of IPTV applications to make IPTV service offering more interactive, compelling and competitive. An ecosystem is meant to foster and promote collaboration between service providers and (primarily local and regional) third party application developers and content producers,





including such things as business models, development support, and testing infrastructure. Also of importance is looking beyond just IPTV, but making it part of a converged "three-screen" strategy, including over-the-top content, personalization, and user-generated content.

- **Is multi-view video the future of television over the Net?** With the progress of computer graphics and computer vision technologies, 3D/multi-view video applications such as 3D-TV and tele-immersive conference become more and more popular and are very likely to emerge as a prime application in the near future. A successful 3D/multi-view video system needs synergistic integration of various technologies such as 3D/multi-view video acquisition, compression, transmission and rendering. The focus will be on how to address the challenges of developing multi-view video systems.
- **Beyond IPTV:** Building large scale video delivery capabilities

## 2.6 Content Delivery

Internet consumption patterns have evolved from "bandwidth-skinny," short duration activities to bandwidth-hungry, always-on applications such as video. As increasingly rich media services and applications emerge, network-based service provider infrastructures must adapt to keep up with end users' demands for capacity and quality-of-service expectations. Discussion topics in this track could include the following,

- **Partner QoS Class:** The utilization of the Internet backbone has increased substantially with the introduction of online service providers (or over-the-top players) delivering attractive streaming video offerings. The most successful of these are offering all-you-can-eat plans that are responsible for estimated 20+% of peak hour backbone capacity, and this number is growing. This interferes with the traditional financial model of the public Internet, where carriers are adequately compensated for moderate growth of this network due primarily to a growing subscriber base.
- **Content Delivery Networks:** Opportunities for telecommunication carriers to deploy CDN capability as an alternative to growing network capacity, and to become a long-tailed content aggregators. Discussion on the development of a unified, wireline/wireless access quality of experience management infrastructure, with session-persistent delivery of QoS managed, adaptive bit rate content, enabling a user to seamlessly continue to view content while moving from one device to another.
- **Social networking integration**

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## 3. SERVICES AND APPLICATIONS

### 3.1 Application Frameworks

The growing practice of introducing new technologies into consumer markets prior to industrial markets will be the most significant trend affecting information technology (IT) during the next 10 years, according to Gartner, Inc. As a result, the majority of new technologies enterprises adopted for their information systems between 2007 and 2012 will have roots in consumer applications. [http://www.gartner.com/press\\_releases/asset\\_138285\\_11.htm](http://www.gartner.com/press_releases/asset_138285_11.htm)

Discussion topics in this track could include the following,

- Application enablement through SDF
- Mobilization as a Service (MaaS)
- M2M - embedded identity modules
- Mobile Enterprise Applications
- Mobile Application security frameworks
- NFC enabled mCommerce - mPayment, mTicketing, mWallet
- Multi-cast connectivity to support video (BTV, training video, corporate messaging), mass data push (brokerage houses, exchanges, retail SKU databases), digital signage, etc.

### 3.2 Service Management

- Autonomic Networking, Complex and Self-\* Networks
- Management of New Emerging Networks/Services

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### 3.3 Healthcare

Globalization, outsourcing, productivity improvement, cost cutting, and healthcare reform are key factors disrupting the status quo in the healthcare industry today and for the foreseeable future. The volume of clinical data collected from embedded and consumer medical devices will grow exponentially, providing significant opportunities to apply clinical analytics and clinical decision support tools to create actionable insights for both clinicians and consumers, to conduct and evaluate quality of care and patient outcomes.

The affect of globalization and the entrance into new markets requires new infrastructure and systems which can be supported quicker, and often cheaper, by utilizing cloud-based technology, such as CRM delivered via SaaS. Discussion topics in this track could include the following,

- mHealth services developments: Mobile solutions that will help patients manage disease, remember to take medications, manage weight loss, and monitor wellness programs
- Cloud computing models for Healthcare industry
- Integration, privacy, security and solution maturity
- Scalability, availability and security

### 3.4 Hospitality

- Hotel virtually in room solution (audio + video + web conferencing and webcasting)
- Integration of hotel ecosystems: Energy management, gas detection system monitoring, security camera system, flood alarms, internet connectivity...)

### 3.5 Government and Defense

- Social/Economic Aspects of ICT (Information Communications technologies, covers any product that will store, retrieve, manipulate, transmit or receive information electronically in a digital form. For example, personal computers, digital television, email, robots.
- Content neutrality: IPTV vs. TV over the internet
- Examination of N-Screen strategy regulatory implications

### 3.6 Energy Management

- Power-aware Switching and Routing, Energy-efficient (green) Networking

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