Transforming the Network... Transforming the **EXPERIENCE**

2007 ATIS Annual Report











ATIS is committed to providing leadership for, and the rapid development and promotion of, worldwide technical and operations standards for information, entertainment and communications technologies using a pragmatic, flexible and open approach.

Transforming the Network . . . Transforming the Experience

Rapid technological advancements have affected all aspects of our lives, transforming both the network and the consumer experience.





Remarkable advances in technology are transforming business and industry, requiring cooperative adaptation at every level to deliver advanced services to demanding consumers.

At ATIS, the industry's visionaries and technology leaders work together to develop and promote worldwide technical and operations standards for the communications, information and entertainment industries.

With over 25 years of experience, ATIS is positioned to both meet today's challenges and respond swiftly to the future direction of the industry and the consumer marketplace.



A Message from the President and CEO Susan M. Miller

I am pleased to present the 2007 ATIS Annual Report. Operating under the hardearned principle of consensus, ATIS continues to advance the ability of our over 300 member companies to deliver products and services that fundamentally change the way consumers live, work and communicate.

ATIS engages industry visionaries and technology leaders to define the priorities for technical planning and standards development that respond to the business needs and objectives of our member companies. Together, we are *Transforming the Network...Transforming the Experience.*

25 Years

Since its inception and over its 25 year history, ATIS has remained responsive to the rapidly changing communications industry. From divestiture in the 1980s to now – the era of convergence, IPTV, home networking and Web 2.0 – ATIS has remained flexible to address the priorities of its members who now comprise the communications, information, and entertainment industry and who deliver products, services, and content to the global marketplace.

As we look forward, we have many reasons to be excited about the opportunities we have on the horizon. Among these is fulfilling our role as an industry leader through a commitment to sustainable solutions that will minimize adverse environmental impacts while advancing the commercial success of our member companies. We will embrace important "green" initiatives this year.

ATIS engages industry visionaries and technology leaders to define the priorities for technical planning and standards development that respond to the business needs and objectives of our member companies.

Together, we are *Transforming the Network... Transforming the Experience.*

2007 Achievements and Priorities

The capstone of 2007 was a year-long strategic review conducted by the ATIS Board to enhance our position in the global marketplace and ensure ATIS' vibrant future. As a result, we now have a new mission statement and a new view on the definition of ATIS membership that will enable us to launch an expanded membership recruitment effort.

Over the past year, ATIS' Technology and Operations (TOPS) Council continued to define the business priorities of our member companies. ATIS' committees developed and promoted technical and operations standards to address these priorities and the business needs of our members. In 2007, ATIS published 108 technical and operational standards.

Success Belongs to the Board, Members and Committees

In order to maintain our leadership role for the next 25 years, ATIS is dependent upon the unwavering commitment of our member companies and the Board of Directors to the mission of ATIS. I am deeply grateful to the ATIS Board for its visionary leadership and support, to the ATIS members for their commitment to our important agenda, and to our committees and forums who work tirelessly on our behalf as detailed in their outstanding reports in this Annual Report.

Together, we are ready for the opportunities ahead.

Transforming the Network . . . Transforming the Experience

A broad array of consumer devices are now interconnected in the home, and the future is bright with possibilities. A new generation of easily networked devices and appliances that are accessible from remote locations is revolutionizing our experience in the home - transporting consumers far beyond the traditional appliances that were once familiar.



"I just walked in the door – let me switch our conference to my TV now."



"Your daughter's report card is displayed. As you can see she is doing quite well in Algebra this semester."



Welcome home. You are running low on milk. Shall I place an online order?

The oven is preheating to 400 degrees and will be ready in five minutes.

Do you want to search for a dessert recipe that matches the ingredients you have in the refrigerator?

Ensuring interconnected appliances can function seamlessly requires the collaboration of a diverse community of service providers, manufacturers, software developers and related companies. ATIS brings together leaders in the communications industry to create the vision and define the path for technology, developing the standards and solutions that support the deployment of these new products and services.

Time to buy some milk The oven is preheating to casserole temperature.

2007 Highlights at a Glance

Board of Directors

Industry leaders provide strategic vision to the organization

• Completed year-long strategic review resulting in a new mission statement, revised membership definition, development of Centers of Excellence and introduction of "green" initiatives

TOPS Council

Senior technology executives provide leadership for priority work

- Released four reports on priority areas:
- Convergence
- Optical Access Networks
- Inter-carrier VoIP Call Routing
- IPv6
- Conducted convergence workshop to identify work priorities
- Launched the IPv6 Study Group
- Completed Next Generation Networks and Security Work Plans

CIO Council

Chief Information Officers from the largest service providers frame, coordinate and advance solutions to common IT issues

- Shared information across member companies about infrastructure, technical issues, and applications to identify IT challenges and best practices for:
 - Intracarrier Business Process Alignment
 - Social Networking
 - Free and Open Source Software
- Promoted development of IPTV serial programming and Internet video standards

IPTV Interoperability Forum

Global IPTV services companies and vendors forge the path for IPTV standards

- Released the IPTV Packet Loss Issue Report
- Released IPTV High Level Architecture
- Completed the IIF Default Scrambling Algorithm (IDSA)
- Developed QoS Metrics for Linear Broadcast IPTV and QoS Metrics for Public Services

Incubator Solutions Programs

Provides the industry with a "fast-track" process for resolving technical and operating issues

- Worked to create distinct solutions to support the FCC "Integration Ban" for Multiple Video Service Providers to separate the security functions of their networks
- Presented industry proposal for alternative regulations regarding hearing aid capability for mobile devices

Regulatory

Promotes a regulatory and legal environment that supports technical operations and standards development

- Filed new number portability guidelines with the FCC
- Advocated in support of industry standards work in compliance with Communications Assistance for Law Enforcement Act
- Advised the FCC of ATIS industry-accepted methodologies related to E911 compliance testing and wireless location technologies
- Served on the Commercial Mobile Service Alert Advisory Committee; urged the FCC to adopt the committee's technical recommendations for transmitting emergency alerts using commercial mobile services

ATIS TechThink Conference

Presented 16 conference sessions highlighting the direction of communications technology at NXTcomm 2007 in Chicago

Global Collaboration

As a founding member of Global Standards Collaboration (GSC), ATIS works closely with its colleague standards organizations from around the globe

- Led delegation to Kobe, Japan, presenting ATIS' leading work on IPTV and Convergence
- Laid groundwork to re-focus GSC's emphasis on global high priority topics

Annual Meeting of the Committees

• More than 50 committees, forums and tending subcommittees gathered for a week of cross-committee advanced technical planning and standards work

2007 Highlights

TOPS Council

Chair: Pieter Poll Chief Technology Officer Qwest

Addressing Telecom's Most Pressing Standardization Priorities

The Technology and Operations (TOPS) Council identifies the industry's most pressing technical and operational priorities and coordinates standardization efforts industry-wide to produce interoperable, implementable, end-to-end solutions. The TOPS Council is a standing committee of the ATIS Board of Directors and consists of the industry's most senior technology officers and executives from leading communications companies.

Through the leadership of the TOPS Council in 2007, ATIS saw the publication of the Exploratory Group on Convergence Report and Recommendations; provided direction on convergence through a workshop to identify and delegate priority work to ATIS Committees; released the Inter-Carrier VoIP Call Routing (IVCR) Assessment and Work Plan; released the Optical Access Networks (OAN) Assessment and Work Plan; released the IPv6 Task Force Report on Transition Challenges; identified and initiated work on new industry priorities including Home Networking, Next Generation Carrier Interconnect and Services Oriented Networks; and continued oversight of committee work on the TOPS Council's Priority Work Plans for the Next Generation Network (NGN), Network Security and Voice over IP (VoIP).

TOPS Council Initiatives

Convergence Chair: Chris Rice Executive Vice President, Shared Services AT&T

For the past several years, ATIS has been engaging leading standards development work relative to the ability of the communications technology industry to provide converged services over the Next Generation Network (NGN). In 2006, the TOPS Council launched an Exploratory Group on Convergence (EGC) to address industry needs from a business perspective. In August 2007, ATIS released its ATIS EGC Report and Recommendations, which provided a comprehensive analysis of the issue along with recommended steps for its committees and member companies that, when implemented, will advance industry abilities to deliver converged services.

In early 2007, two new TOPS Focus Groups were commissioned to address **Inter-Carrier VoIP Call Routing** and **Optical Access Networks**, respectively.

IVCR

Chair: Pieter Poll Chief Technology Officer Qwest

The Inter-Carrier VoIP Call Routing Focus Group (IVCR-FG) convened throughout 2007 to produce the ATIS Inter-Carrier VoIP Call Routing (IVCR) Assessment and Work Plan. The IVCR-FG sought to investigate, define and prioritize the issues arising from or preventing call routing for inter-provider VoIP interconnection. It also sought to provide a technical assessment of standards gaps for common interconnection. This assessment included the consideration of Internet Protocol (IP)-based call flows, routing databases, different industry and vendor approaches and existing standards activities affecting North American as well as international call routing.

OAN

Chair: Kevin W. Schneider Chief Technology Officer ADTRAN, Inc.

The Optical Access Network Focus Group

(OAN-FG) released its *Optical Access Networks Assessment and Work Plan* in September 2007. The *Assessment and Work Plan* provides a comprehensive analysis of G-PON-based optical access systems and specifications, noting high-priority areas in which standards and industry agreements must be developed for deployment in North America.

In September 2007, the ATIS NIPP formed a new sub-committee, the NIPP-OAN, whose initial work will be to progress the issues defined in the OAN-FG's report and to provide a venue for ATIS to address issues in the OAN arena.

IPv6

In June 2007, the TOPS Council's IPv6 Task Force completed the second phase of its work to provide further detail on the priority areas defined in its initial report and to ensure the standards and business drivers needed to support the transition to IPv6 are known and met. This second phase resulted in the ATIS Internet Protocol Version 6 (IPv6) Task Force Report on Transition Challenges. The report identifies standards development initiatives that will enable the transition to take place in a secure, logical manner that fits with the needs of vendors and network operators to provide solutions and best practices. Following the release of the IPv6 Task Force report, the TOPS Council initiated an IPv6 Study Group to investigate the need to develop and the potential scope of a National Readiness Plan for the transition to IPv6. The IPv6 Study Group's work will be published in 2008.

New TOPS Priorities in 2007

The TOPS Council identified in late 2007 three new priorities: Home Networking, Next Generation Carrier Interconnect and Service Oriented Networks.

Home Networking Co-Chairs:

Nick Adamo Senior Vice President, US Service Provider Cisco Systems

Bob McIntyre CTO, Service Provider Technology Group Cisco Systems

As services move into the customer premise, service providers, network operators and consumer electronics vendors face a set of challenges to support the deployment of IPbased services in the Home Network. The TOPS Council commissioned in late 2007 the Home Networking Focus Group (HNET-FG) to evaluate the home networking landscape in order to, among other objectives, define a "high-level" functional architecture of the home network; ascertain the roles and responsibilities of the multiple standards organizations operating in the space of home networks; evaluate the need for a certification process, and if necessary, identify the certification services needed and potential providers; and develop recommendations to address the coexistence

2007 Highlights

of different home networking technologies in the same home and nearby homes. The HNET-FG is expected to complete its objectives in 2008.

Next Generation Carrier Interconnect (NGCI)

The transition from traditional circuitswitched services to IP will allow service providers to offer network-to-network interconnection and customers to enjoy a seamless end-to-end experience. To support this migration, standards are needed to ensure the interoperability of legacy domains within IP domains and network-to-network interfaces. In early 2008, a workshop was held on the topic of NGCI to identify short and long-term priorities as well as areas for future technical work including the following: the transition from legacy to IP architecture, emergency government services, service agreements, border session controls, security, traffic management, and signaling and media protocols. Technical work on these topics is currently ongoing within ATIS committees and will continue to be tracked in 2008.

Service Oriented Networks (SON) Chair: Matt Bross Group Chief Technology Officer

BT

As the IMS platform continues to evolve and work with Web services, the industry will aim to enhance its ability to provide services across multiple domains including the Web. The new Web 2.0 development platform or some hybrid of the IMS and Web 2.0 platforms offers opportunities for further study.

The TOPS Council commissioned the formation of the SON-FG in early 2008 to assess gaps in industry standards and implementation. The SON-FG will, among other objectives, direct an examination into the different approaches across communication, information and entertainment application domains; investigate and identify a set of interfaces that enable rapid service development for communication, information (profiles and preferences) and back office management operations; and determine service enablers and complementary business models in a cost effective, secure manner.

The ATIS CIO Council

Chair: Dick LeFave, Executive Vice President and Chief Information Officer for Sprint Nextel

Vice Chair: Shaygan Kheradpir, Executive Vice President and Chief Information Officer for Verizon

Addressing Technology's Growing Influence of Information on the Network

The ATIS CIO Council identifies and discusses Information Technology (IT) issues common to the service provider community; frames, coordinates and advances solutions to common IT issues; and provides perspective and direction to the development of industry standards, guidelines and best practices. Members of the CIO Council are the most senior Chief Information Officers from among the largest service provider companies.

CIO Council Initiatives

The CIO Council addressed the following priority initiatives for 2007:

 Shared information across member companies on infrastructure, technical issues and applications in order to identify IT challenges and best practices for:

- Intracarrier Business Process Alignment: The CIO Council reviewed the overall process and the applications behind the process alignment strategy and methodology. Areas of focus included organizational alignment, service level agreement (SLA) development and information technology architecture.
- Social Networking: The CIO Council explored the need to manage the company use of the Web as a result of blogging and other social networking technology. Areas of focus included internal/external policies, existing technologies, protection of intellectual property and internal/external hosting.
- Free and Open Source Software (FOSS): The CIO Council addressed concerns about desktop protection, guarding against hidden licenses, governing the use of software and general product support. Areas of focus included license management, vendor software support, security of open source, implementation and staff training.
- Promoted development of IPTV Serial Programming and Internet Video standards:
 - The ATIS IPTV Interoperability Forum (IIF) develops standards and engages in related technical activities that enable the interoperability, interconnection and implementation of IPTV systems and services. In recognition of the evolving IPTV technology, the CIO Council conducted an analysis to determine if the ATIS IIF Work Plans already include or could be expanded to incorporate emerging IT challenges identified by the CIO Council. All ATIS fora/committees with IPTV-related work were asked to ensure that their respective work plans aligned with the IIF roadmap and timeline. The

analysis and coordination of all milestones will support the ongoing effort to identify and define IT requirements for IPTV.

Other CIO Council Areas of Focus

Diversity assurance continues to be relevant in a consolidated multi-carrier environment due to customer concerns around diversity and the ability to address legal and regulatory concerns associated with sharing sensitive data. Under the auspices of the CIO Council, work progressed this past year on the Diversity Assurance Analysis (DAA) objective, culminating with the release of a Final Report in mid-year.

The DAA project emanated from the National Diversity Assurance Initiative (NDAI), which concluded in February 2006 and was based on a recommendation for a small-scale scoping effort to determine requirements and costs required to provide an end-to-end diversity assurance solution. ATIS submitted to the National Communication System the DAA Final Report and recommendations that included a set of common data elements and business assumptions and an analysis of potential technical model alternatives.

Status Report on Previous (2006) Priority Areas

Efforts continued on past CIO Council priority areas referred to other ATIS fora/committees. These include the following initiatives:

 Work progressed to develop a common OSS/ BSS architecture model to improve efficiency of IPTV support systems and operations. ATIS published a reference architecture standard for IPTV to guide IPTV service providers in implementing more flexible and

2007 Highlights

cost-effective operational platforms. The joint team of TMOC and OBF representatives will next address Ordering Application Program Interfaces (API) for IPTV.

 The ATIS Information and Data Security Committee (IDSC) addressed issues related to privacy concerns through three white papers distributed to CIOs for use within their respective organizations.

New CIO Council Initiatives

The Council has identified the following priority initiatives for 2008:

- Optimization of FOSS: Building upon the findings from the 2007 initiative to share information about open source software, the next steps will be to examine the best practices of lifecycle management of FOSS.
- Explore business models that more closely align IT and network responsibilities within the enterprise: As the lines blur regarding the scope of these responsibilities, there is a potential for increased efficiencies and service improvements. This issue results from the findings of the previous Intracarrier Business Process Alignment initiative.
- Assess and respond to the implications of Customer Proprietary Network Information (CPNI) requirements. Additional regulatory protective measures are forthcoming.

ATIS IPTV Interoperability Forum

Global Leader in IPTV Standards Development

The ATIS IPTV Interoperability Forum (IIF) continues to be a global leader in IPTV standards development. In January 2007, ATIS sponsored the ITU-T IPTV Focus Group (FG) at Microsoft headquarters in Mountain View, California to strengthen the ITU-T IPTV FG relationship and progress IPTV standards collaboration.

ATIS IIF: Key Deliverables and Milestones

Since its establishment in July 2005, the ATIS IIF has produced a number of key requirements and framework documents to serve as the foundation for further development of IPTV specifications and standards. In 2007, ATIS IIF continued its work toward this end. The following summarizes key activities and deliverables published in 2007:

- IPTV Packet Loss Issue Report (ATIS-0800005)—Reviews many of the factors that may cause packet loss in IPTV transmissions and addresses solutions to mitigate packet drop.
- IIF Default Scrambling Algorithm (ATIS-0800006)—Specifies a default scrambling/ descrambling algorithm for MPEG-2 Transport Stream and scrambling algorithm signaling. Provides network operators with a maximum choice of IPTV Receiving Device platforms.
- IPTV High Level Architecture (ATIS-0800007)—Provides a high-level architectural framework and the supporting

network design for the implementation of end-to-end IPTV systems. Provides the reference architecture for the IPTV functional specifications being defined in separate IIF documents now under development within the ATIS IIF.

 QoS Metrics for Linear Broadcast IPTV (ATIS-0800008)–Offers a consensus view of the meanings of QoS metrics for linear broadcast IPTV, including video, audio, and the synchronization between audio and video. Identifies measurement points, applicable measurements and measurement methodologies.

ATIS IIF Standards and Specifications Under Development in 2008

IPTV Linear Broadcast Service

Describes the service capabilities associated with the delivery of the Linear/Broadcast TV service to the end-user.

Consumer Domain Attachment and Initialization Specification for IPTV

Provides an end-to-end, high-level description of the process for attaching a device to the network and service provider.

Remote Management of Devices in the Consumer Domain for IPTV

Addresses the remote management of devices in the consumer domain, focusing initially on the Delivery Network Gateway (DNG) and IPTV Terminal Function (ITF) devices and in relation to device authentication. It also will address device attachment to the transport network; image download; provisioning of parameters; status monitoring; remote diagnostics; fault recovery; and security management.

IPTV Multicast Network Service Specification

Describes a simple IP multicast service that the network provider can offer for use as a basis for a linear/broadcast TV service. The specification will focus on the service requirements from the perspective of the IPTV service provider rather than detail specific implementation mechanisms within the network operator domain.

Media Protocols Specification for IPTV

Defines the media protocols for IPTV service, including the protocols used for actual audio and video media delivery over IP. Reliability techniques applied at the IP layer and above will also be considered, including Quality of Service marking, Forward Error Correction at the Application or Transport layer and retransmission.

Emergency Alert Service (EAS) Provisioning Specifications for IPTV

Supports the offering of an Emergency Alert System (EAS) for IPTV. It will broaden the delivery of EAS messages from a few linear channels to the complete IPTV experience.

IPTV QoE Model Requirements and Model Definition

Supports the estimation of end-to-end quality, incorporating all the factors that would impact the user experience in real time. These would include media transmission path quality metrics, video codec and loss concealment and factors that affect playback control.

Categorized Listing of Fault Modes for IPTV

Defines a standard set of fault modes that cause the improper functioning of an IPTV

2007 Highlights

component or signal. The type of fault is a vital input to service assurance, test, fault and performance operations and systems.

QoS Metrics and Measurements for Public Services for IPTV

Provides deployable and immediately useful QoS metrics, measurement points, applicable measurements and measurement methodologies for Emergency Information (e.g. EAS), Closed Captioning, Content Advisories and V-Chip Technology for IPTV. Additional metrics will be added to the document as more functional components of the architecture are defined.

Trial Use Standard for Estimated Peak Signal to Noise Ratio (EPSNR)

Delivers a trial use standard that documents the EPSNR algorithm and a test plan that will be used to determine if the EPSNR algorithm is an accurate predictor of the QoE based on QoS metrics/data.

Secure Download Interoperability Specification for IPTV

Addresses the need for an interoperable Secure Download mechanism for the IPTV Receiving Device.

Application Level Interfaces (API) Interoperability Specification for IPTV

Addresses the need for interoperable DRM Application Programming Interfaces.

IPTV Digital Rights Management (DRM) Requirements Update

Supplements and/or revises the IIF's existing IPTV DRM Requirements document to include updates identified by IIF members, IPTV/ DRM stakeholders, and/or IPTV liaison partners.

Standard Public Key Infrastructure (PKI) Certificate Format

Standardizes the delivery, distribution and validation of encrypted keys in a trusted certificate format. The encrypted keys within a key certificate are a security component consisting of digital signatures used to authenticate data sources and content.

Certificate Trust Management Hierarchy

Provides the basis of trust for PKI operations by creating a PKI hierarchy that satisfies trust requirements of security solutions, identifying trust relationships affected by PKI hierarchies and establishing requirements for the generation, distribution, and revocation of IIF PKI certificates.

Security Robustness Rules

Facilitates interoperability and encourages product innovation while maintaining standardized procedures, interfaces, and platforms with respect to secure transmission and storage of materials.

Distribution of IPTV Content in the Subscriber's Authorized Service Domain

Identifies requirements for interoperability of the system and components necessary to share protected content in the IPTV/DRM security environment.

Consumer Domain Configuration Metadata Requirements Specification for IPTV

Establishes requirements for metadata associated with configuration of consumer domain devices–specifically the Delivery Network Gateway (DNG) and the IPTV Terminal Function (ITF)–during network attachment, initialization, configuration and remote management.

IPTV Metadata Consumer Requirements Specification

Establishes basic consumer (Subscriber and User) profile and preferences metadata requirements for an IPTV Consumer Metadata Specification/Standard.

IPTV Electronic Program Guide (EPG) Metadata Requirements Specification

Establishes basic metadata requirements for an IPTV EPG. Standardization of a rich set of EPG-related metadata for an IPTV environment is needed in order to support a unified EPG functionality that meets the service selection and acquisition needs of consumers, while minimizing the level of effort required on the part of content providers, service providers, network providers and ITF providers.

IPTV Emergency Alert System (EAS) Metadata Requirements

Defines metadata elements for an EAS announcement, interfaces across which metadata are exchanged, formats for elements of metadata and protocols for metadata exchange.

ATIS IIF Task Forces

Architecture (ARCH TF)

Develops an overarching reference architecture for IPTV and to create the necessary standards that would enable multiple access media (xDSL, Fiber, Wireless) and address issues surrounding legacy and NGN integration.

Digital Rights Management (DRM TF)

Works with other standards groups involved in DRM activities, with the end goal of

selecting a single DRM method for IPTV or establishing a framework where multiple DRM methods can be inserted.

Metadata (MTD TF)

Addresses the exchange of metadata between content providers and service providers, and between service providers and consumers for IPTV.

Quality of Service Metrics (QoSM TF)

Identifies or establishes appropriate QoS metrics for IPTV, including fidelity standards for subscriber video delivery; allowing for transcoding and packet loss; error "link budgets"; specifications for error concealment in video codecs; definitions for measuring channel change latency; and similar QoS and QoE metrics.

Testing & Interoperability (T&I TF)

Defines interface specifications and develops test plans for equipment based on the interface specifications. It also identifies appropriate testing and interoperability work being conducted in other SDOs and industry forums and, looking forward, may potentially sponsor a testing or a certification program for IPTV equipment.

2007 Highlights

Regulatory

ATIS promotes a regulatory, legislative and legal environment that supports the development and deployment of technical and operations solutions and standards. During 2007, ATIS participated in numerous proceedings on an array of issues including public safety, new technologies and accessibility.

Public Safety

In 2007, ATIS promoted the adoption of workable, technically neutral, enhanced 911 rules. In response to a Federal Communications Commission (FCC) rulemaking seeking information on ways to enhance the accuracy and reliability of 911 location data, ATIS filed comments urging that, if new 911 rules are adopted to establish a single location accuracy requirement for both network-based and handset-based technologies, the new requirement must be commercially viable and must not favor any specific technology. In its comments, ATIS also informed the FCC that it had published many industryaccepted methodologies related to E911 compliance and maintenance testing.

ATIS' public safety-related activities also included work on the Commercial Mobile Service Alert Advisory Committee (CMSAAC), a technical advisory committee that was created by the FCC to address statutory requirements for transmitting emergency alerts using commercial mobile services. ATIS was selected as an industry representative on this committee and provided input on the CSMAAC's recommendations to the FCC. ATIS also filed comments with the FCC to support adoption of the CMSAAC's recommendations in their entirety as a way to address the various issues involved in employing emergency alert capabilities in commercial mobile services.

In 2007, ATIS continued an initiative started in the wake of Hurricane Katrina. ATIS worked with the Association of College & University Telecommunications Administrators (ACUTA) to modify its hurricane readiness checklist for use by colleges and universities. ATIS' hurricane readiness checklist was designed initially to help service providers gauge their readiness for predictable natural disasters and has been cited by the FCC as an example of an industry best practice.

New Technologies

In August 2007, ATIS filed comments in response to an FCC rulemaking seeking comment on the development of two-way digital cable-ready devices. ATIS made the FCC aware of the ATIS Incubator Solutions Program #5–IP-based Separable Security Incubator (AISP.5-ISSI)–established to develop solutions in the emerging IPTV market and to address several open issues by developing standards that support bidirectional, IP-based, open architectures. ATIS invited the FCC to consider its forthcoming solutions, anticipated in 2008, for IP-based separable security in the emerging IPTV market.

ATIS has also taken an active role in responding to the FCC's November 2007 decisions regarding local number portability (LNP). Among other things, these decisions addressed the rights and obligations of service providers, including VoIP providers, regarding LNP. The new rules proscribe that no more than four data fields may be used to validate the port of a telephone number. Through filings and discussions with FCC staff, ATIS explained the complexities of the local number portability processes and the central role that the Ordering and Billing Forum (OBF) has played in these processes.

To support compliance with the new porting rules, the OBF also filed with the FCC its Simple Port Service Request Process, which explained those fields that are necessary to provision a wireline-to-wireline port in addition to the four validation fields. During a meeting with FCC staff regarding this issue, ATIS also noted that additional "provisioning" information is necessary for wireline, wireless and intermodal porting.

Accessibility

In 2007, ATIS continued to facilitate better understanding between the wireless industry and advocates for consumers with hearing loss. In April 2007, ATIS, under the auspices of its Hearing Aid Compatibility Incubator (AISP.4-HAC), filed with the FCC a voluntarily achieved Joint Consensus Proposal that provided a comprehensive alternative to the FCC's then existing rule requiring that 50% of all wireless devices be hearing aid compatible.

At the beginning of 2008, the FCC issued its final rules for hearing aid compatibility that adopted in large part ATIS' Joint Consensus Proposal. Additionally, the FCC lauded ATIS' collaborative consensus process as an important model demonstrating the effective partnership of diverse stakeholders.

ATIS also worked on issues related to the Telecommunications Relay Services (TRS). In March 2007, ATIS submitted an updated TRS guideline document to the FCC. The guideline addresses the reduction of inappropriate blocking on SS7 networks of calls using Text Teletype (TTY) and similar technologies designed to assist customers with hearing and speech disabilities. In December 2007, ATIS filed its "Numbering for Internet Based Relay Services" report with the North American Numbering Council. The report addresses Video Relay Service (VRS), one form of TRS, and proposes that VRS Users be assigned geographic telephone numbers by a neutral party.

ATIS TechThink

ATIS held its second TechThink Technology Conference in June 2007 in Chicago at the debut of NXTcomm, the new industry event and trade show jointly owned by USTelecom and Telecommunication Industry Association (TIA). The program featured 16 thoughtprovoking sessions and mind bender panels from senior technology executives and visionaries in the communication industry. Areas of focus included IPTV, IMS, Broadband Service Deployment Strategies, 3G, WiMAX and more.

ATIS TechThink will return for its third year at NXTcomm08, scheduled for June 16-19, 2008 at the Las Vegas Convention Center.

2007 Highlights

Collaboration

ATIS/ITU-T Events

In January 2007, ATIS sponsored the ITU-T IPTV Focus Group, a five-day meeting attended by over 200 participants, at Microsoft facilities in Mountain View, California. At this meeting, ATIS provided details of its IPTV standardization activities to date and shared with the Focus Group the ATIS IIF's various IPTV requirements.

In July 2007, ATIS hosted a workshop in Montreal, Canada with the ITU-T to discuss the impact of packet-based, NGN technologies among satellite network operators. Entitled, "Satellites in the NGN?", the workshop offered an in-depth understanding of the various networking and standardization issues that satellite service operators must address in the deployment of NGN services.

GSC 12

ATIS joined representatives from seven other leading global standards organizations and the ITU-T to facilitate collaboration, accelerate the process of global telecommunications and radio standards development, and promote interconnectivity and interoperability. The 12th Global Standards Collaboration (GSC-12) meeting was held in Kobe, Japan in July 2007.

ATIS was the lead organization on the IPTV discussion at GSC-12 and will host GSC-13 in Boston during 2008. Subjects discussed at GSC-12 also included topics such as: identity management, NGN, home networking, security, eHealth, emergency communications, IMT standardization, location-based services, intelligent transportation systems, satellite services and communications onboard aircraft.

Commercial Mobile Alerts Service (CMAS)

In November 2007, after serving on the FCC's Commercial Mobile Service Alert Advisory Committee (CMSAAC), ATIS initiated the development of standards in support of CMAS per the CMSAAC recommendations. ATIS also established itself as the lead organization in working with TIA TR45 in the development of joint standards. The expertise from both groups will aid in developing standards that consist of common technical resolutions for Global System for Mobile Communications/ Universal Mobile Telecommunication Systems (GSM/UMTS) and cdma2000 technologies as they relate to CMAS. In April 2008, the FCC is expected to make its decision on the CMSAAC recommendations, and subsequently, in September 2008, commercial mobile service providers must elect whether or not to provide emergency alerts to subscribers.

2007 ATIS Annual Meeting of the Committees

The ATIS Annual Meeting of the Committees was held in April 2007 at the Minneapolis Convention Center. During the meeting, more than 50 ATIS committees, forums and tending subcommittees, including the newly established Information and Data Security Committee (IDSC), came together to engage in standards work and technical activities.

2007 ATIS Awards Program

In 2007, the ATIS Annual Awards Program included four awards categories: the ATIS Award for Distinguished Service in Communications Standards; the ATIS Award for Leadership in Standards Development; the ATIS Award for Outstanding Contributions to an ATIS Forum or Committee; and the ATIS President's Award.

2007 ATIS Award for Distinguished Service

Paul Levine, Telcordia Technologies

The 2007 Distinguished Service Award was presented to Paul Levine of Telcordia Technologies for his nearly 20 years of technical contributions and leadership in ATIS. Recipients of the Distinguished Service Award are ATIS committee or forum participant who have provided unique and outstanding contributions to the work of ATIS committees over a period of time. Persons receiving this award must have participated in ATIS Committees for five or more years.

Paul's contributions to the formulation and success of telecom standards include Coding and Language Data Representation standards created at ATIS, as well as related standards established by the ITU-T and UNIFACT and OASIS (ebXML) standards—all of which are widely implemented. His technical work and leadership as an ITU-T Rapporteur and as an efficient liaison to global standards organizations for ATIS has contributed to ATIS' highly respected global reputation in the industry.

2007 ATIS Award for Leadership in Standards Development

Martin Dolly, AT&T

Martin Dolly of AT&T received the 2007 Award for Leadership in Standards Development. This award is given to an ATIS committee or forum leader whose vision and leadership have resulted in support for ATIS standards and recognition of ATIS' committee work within the industry during the past year. Martin was recognized for his strong leadership within the Signaling, Architecture and Control Subcommittee of the ATIS Packet Technologies and Systems Committee (PTSC). Under his leadership, the subcommittee successfully completed many critically needed standards for NGN architecture, Emergency Telecommunications Service, Operator Services and other important areas - many of them tied directly to priority work identified by the ATIS TOPS Council. Mr. Dolly's leadership, participation and subject matter expertise has been instrumental in leading and directing NGN related technical work within the ITU-T.

2007 Highlights

2007 ATIS Award for Outstanding Contributions to an ATIS Forum or Committee

The Award for Outstanding Contributions to an ATIS Forum or Committee is presented to individuals for outstanding services in the standardization activities of ATIS. Recipients have demonstrated significant efforts to support acceptance and use of ATIS standards throughout the industry. The following ATIS participants received this year's award: Michael Bilca, Tridea Works; Linda Garbanati, Alcatel-Lucent; Ken Havens, Sprint-Nextel; Connie Hunt, AT&T; Doug Langley, AT&T; Jim Mahler, Verizon; Christian Militeau, Intrado; Gustavo Pavon, True Position; Lavinia Rotaru, Sprint-Nextel; Ron Ryan, Nortel; Vigar Shaikh, Telcordia Technologies; Peter Silverman, ASSIA; Dave Whitney, AT&T; and Steven Wright, AT&T.

2007 ATIS President's Award

Dan O'Callaghan, Verizon and Richard Brand, Nortel

The ATIS President's Award is presented to an individual who is unsurpassed in the level, quality and strategic nature of contributions made to ATIS. The 2007 ATIS President's Award was awarded to Dan O'Callaghan of Verizon and Richard Brand of Nortel for their outstanding contributions to ATIS through dedicated and creative leadership of the ATIS IPTV Interoperability Forum (IIF). Both Dan and Richard have worked tirelessly to assist the IIF Task Forces to move work forward expeditiously and proactively built effective relationships with other forums working in the IPTV arena. Dan and Richard also ensured that the IIF set and met targets for numerous deliverables of the ATIS Board and the CIO Council and ensured that IIF's work reflects the business objectives of ATIS member companies.

2007 ATIS Committee Reports

Performance, Reliability and Security

PRQC: NETWORK PERFORMANCE, RELIABILITY, AND QUALITY OF SERVICE COMMITTEE

Chair: Mark Neibert, Ygomi Vice Chair: Neal Seitz, NTIA/ITS

The Network Performance, Reliability, and Quality of Service Committee (PRQC) develops and recommends standards, requirements, and technical reports related to the performance, reliability, and associated security aspects of communications networks. PRQC also develops and recommends positions on, and fosters consistency with, standards and related specifications under consideration in other standards bodies. The committee is composed of three Task Forces: Quality of Service (QoS), Security and Network Reliability.

Key 2007 PRQC accomplishments:

- Completed an American National Standard (ANS) entitled Defects per Million (DPM) Metric for Transaction-Based Services such as VoIP. This standard defines a quality metric that gauges the ability of an IP network to deliver transaction-based services at quality levels acceptable to users.
- In cooperation with PTSC and TMOC, led development and approval of an ATIS Technical Report (TR) entitled Information and Communications Security for NGN Converged Services IP Networks and Infrastructure. This TR provides a guide for existing security standards, best practices and regulations. It also identifies remaining security standards gaps, and provides methodology for systematically addressing computer and communications security requirements in IPbased Next Generation Networks (NGN/IP).
- Created a new TR entitled Security for Next Generation Networks – an End User Perspective, which defines NGN user plane security guidelines and mechanisms.
- Completed and approved a new TR entitled Priority for National Security Emergency Preparedness Services in NGN/IP – Role of Telecommunications Service Priority (TSP), which provides guidance regarding

applicability and usage of the TSP codes for NS/EP in an IP environment.

- Completed an ATIS TR entitled End-to-End Service Availability: General Definition, which defines a method of estimating the overall availability of an IP network connecting many users based on selected point-to-point availability samples. Service providers and equipment manufacturers are expected to use this metric as a basis for network planning and design and to establish Service Level Agreements (SLAs) with customers.
- Completed "ANSI Draft Standard for Trial Use," entitled Reduced Reference Video Calibration Estimation Method. This standard describes four Reduced Reference (RR) video calibration algorithms for use in performing end-to-end in-service video quality measurements.
- Completed a major revision to ANS T1.523, *Telecom Glossary 2000*, supplementing this widely-used standard with several hundred new and revised definitions for network security terms.

PRQC continued to work closely with other ATIS committees (e.g., PTSC, TMOC, IIF). In one joint project, PRQC assisted PTSC in documenting requirements for a new IP Differentiated Service Code Point (DSCP) and Expedited Forwarding (EF) traffic class to support Emergency Telecommunications Service (ETS). This required careful coordination with the IETF and is critical to the deployment of emergency service priority access in IP-based NGNs.

PRQC also submitted texts for two new ITU-T recommendations: a complete text for Recommendation Y.1531, *SIP-Based Call Processing Performance*, and an illustrative Appendix for Recommendation Y.1562, Framework for Higher Layer Protocol Performance Parameters and Their Measurement.

In addition, PRQC contributed to development of a new ITU-T recommendation that will apply the ITU-T defined NGN Resource and Admission Control Functions (RACF) to Multi-Protocol Label Switching (MPLS) based IP core networks.

PRQC launched six new standards development projects during 2007. Year 2008 will add renewed focus on wireline/wireless convergence and new work areas related to fully networked vehicle standards.

TFPC: TELECOMMUNICATIONS FRAUD PREVENTION COMMITTEE

Chair: Fred Fletcher, AT&T Vice Chair: Cheryl Smith Rardin, Consolidated Communications

The Telecommunications Fraud Prevention Committee (TFPC) is dedicated to the prevention of identified fraud vulnerabilities in the national public switched telephone network, and works toward resolving fraud-related issues pertinent to the telecommunications industry. Participants benefit by interfacing with telecommunication professionals in a working forum to discuss and develop resolutions for voluntary implementation by the participants. Due to the sensitive nature of topics discussed, all TFPC participant members work under a mandatory non-disclosure agreement.

In 2007, the TFPC successfully brought closure to the following active issue:

• Issue #078 – Call Tracing/CALEA Compliance

The TFPC was also active on the regulatory front and provided feedback to the following items of concern:

- Fraud challenges related to HR 555: "Family Telephone Connection Protection Act of 2007"
- Fraud challenges related to the "Wright Alternative Petition"

The TFPC plans to follow a new direction in 2008 where it will continue its pursuit and understanding of fraud's impact on the NGN, Convergence, and IP-based service offerings while implementing a roundtable discussion series in which telecommunications experts will be given a forum to discuss fraud activity.

NRSC: NETWORK RELIABILITY STEERING COMMITTEE

Chair: Archie McCain, AT&T Vice Chair: Karl Rauscher, Bell Labs, Alcatel-Lucent

The Network Reliability Steering Committee (NRSC) provides guidelines and tools to the communications industry, with the ultimate goals of maintaining and improving the high level of network reliability in the United States. Through its team of industry network reliability experts, the NRSC establishes industry guidelines and processes to be used in the collection of network reliability data, documents methods for industry use in analyzing outage data, works with the FCC to identify and analyze emerging outage trends, and makes recommendations aimed at improving the reliability of communications networks.

2007 NRSC Initiatives included:

Standards. The committee developed a defined list of classifications for outages that was accepted by ATIS and ANSI as a standard for use within the United States. The standard, entitled Standard Outage Classification was developed to provide a common list and methodology for classifying communications outages.

Technical Reports (TR). In other network reliability analysis work that is closely related to the standard on outage classification, the NRSC also developed and approved a TR on the categorization of communications network equipment. The *Categorization of Equipment Deployed within Communications Networks for Use in Outage Classification and Analysis* TR will be used to assist the categorization of network equipment when performing outage classification and network reliability analysis.

Outage Analysis. The NRSC assembled four special study teams in 2007. The purpose of these special studies is to determine the underlying causes behind national outage trends and determine the most effective best practices for ameliorating such events. These special studies included analyzing DS3 simplex events, malicious activities, equipment categorization, and wireless outages.

The NRSC also carries out special studies for major events. For example, a hurricane preparedness checklist was developed by the NRSC in 2006 and was made freely available as a public service. This document attracted interest from another communications industry group the Association of Colleges and University Telecommunications Administrators (ACUTA). In 2007, the NRSC worked with ACUTA to help them adapt the NRSC hurricane preparedness checklist, which was developed for public carriers, to the special needs of communications for higher education institutions.

2007 ATIS Committee Reports

In 2008, NRSC expects to complete a revision of the Technical Requirements document used to analyze major outages that are FCC-reportable to align industry practices with the current FCC outage reporting rules. The NRSC sub-teams will continue to identify improvements within their focus areas. Finally, the NRSC will continue to work with the FCC to identify outage trends, and to supply industry resources where necessary to reverse negative trends as they are identified.

IDSC: INFORMATION AND DATA SECURITY COMMITTEE

Co-Chairs: Michelle Fisher, Level 3 Dennis Evans, Sprint Nextel

Established in 2006 at the recommendation of the ATIS CIO Council, the Information and Data Security Committee (IDSC) was charged with identifying and addressing information and data security topics specific to the communications industry.

The committee discusses IT-related issues resulting from Sarbanes-Oxley (SOX) compliance, and shares and develops best practices and security approaches. Where appropriate, the IDSC develops IT data and security standards.

Committee deliverables included the publication of three white papers, each serving as a primer for CIOs and other leaders of the telecommunications business:

- Sarbanes-Oxley: Non-employee Logical Access Management (ATIS-0100013)
 - Identifies potential technical, business and legal risks and outlines recommendations to assist in managing logical access for the non-employee
- Security Approaches for the Portability of Data (ATIS-0100018)
 - Describes available industry solutions that incorporate manageability, security policy compliance, and operational excellence for portable device security while enabling business objectives
- Telecommunications Industry Security Controls Standardization (ATIS-0100019)

 Provides a standard reference model for addressing critical security issues based on key standards, best practices and regulations

Other committee work related to SOX included an analysis of the various roles and impacts to compliance. The committee developed a compliance accountability matrix and evaluated the role of key players and the associated activity within the enterprise to address concerns regarding the fragmentation of employees' responsibilities and accountability.

As the IDSC looks forward to 2008, an issue that will require its attention includes identifying the minimum levels of security controls needed to protect sensitive data in transit and storage. In addition, the IDSC will continue to address and resolve any priority initiatives identified and referred by the CIO Council.

ΟΑΜ&Ρ

INC: INDUSTRY NUMBERING COMMITTEE

Chair: Adam Newman, Telcordia Technologies Vice Chair: Robin Smith, Verizon

The Industry Numbering Committee (INC) provides an open forum to address and resolve industry-wide issues associated with the planning, administration, allocation, assignment and use of the North American Numbering Plan (NANP) resources, as well as related dialing considerations for public telecommunications within the area covered by the NANP.

The INC guidelines and recommendations are used as the primary reference documents by the North American Numbering Plan Administrator (NANPA) and the National Pooling Administrator (PA). These documents form the basis for all numbering assignments, reclamation, reservation, area code relief activities, etc., that take place within the U.S.

The INC successfully resolved 27 issues in 2007. The majority of these issues affected changes and process improvements to the "Central Office Code Assignment Guidelines" (COCAG) and the "Thousands-Block Pooling Administration Guidelines" (TBPAG). These ATIS INC Guidelines are used by all service providers in the U.S. to obtain geographic numbering resources from the NANPA and the national PA. The guidelines reflect the FCC rules for number resource optimization and meet the industry's need for efficient resource acquisition, maintenance and administration.

In March, the INC delivered to the NANC its recommendation for permanent Pseudo-Automatic Number Identification (pANI) Administration Guidelines for use in the routing of emergency calls. These guidelines, written to be competitively neutral and ensure that eligible users are given no advantage or disadvantage in the acquisition of numbers from the Routing Number Authority, were approved by the NANC and submitted to the FCC. On June 28, Thomas J. Navin, Chief of the FCC's Wireline Competition Bureau, wrote to Thomas M. Koutsky, NANC Chairman, to notify him "that the Bureau would incorporate the p-ANI guidelines into the Pooling Administrator contract and to thank him for the hard work on the part of the p-ANI Issue Management Group and the Industry Numbering Committee of the Alliance for Telecommunications Industry Solutions (ATIS)."

This summer, INC in cooperation with ATIS Network Interconnection Interoperability Forum's Network Routing Resources information Committee (NIIF NRRIC) worked for the removal of unnecessary "Switching Entity Information from Public Access Calls" for the removal of Switch CLLI information from the NANPA Web site. Prior to INC's action, the availability of this switch information on a public domain Web site made the telecommunications network vulnerable to possible terrorist attacks or misuse. The removal of this information from the NAPA Web site in September 2007 also helped to satisfy a Homeland Security issue that was based on the events of September 11, 2001.

In 2006, the INC began work on a NANC action item to develop and recommend one or more technical numbering-related solutions regarding Internet-based Relay Services that would meet the functional equivalency requirements of the Americans with Disabilities Act. Once the p-ANI Guidelines (see above) were delivered to the NANC, the INC began work on this important item. With participation from Video Relay Services (VRS) and industry experts, INC's VoIP Subcommittee met on a weekly basis from the second quarter through the end of the year to complete its work. At its final meeting of 2007, INC completed a draft report titled "Numbering for Internet-Based Relay Services." In it the INC proposed that VRS users¹ be assigned geographic North American Numbering Plan (NANP) numbers using currently available call routing methods and that a centralized mechanism administered by a neutral party be provided for obtaining a VRS user's current Internet Protocol (IP) address based on the assigned telephone number (TN). At year's end, INC forwarded its work to the NANC.

NIIF: NETWORK INTERCONNECTION INTEROPERABILITY FORUM

Co-Chairs: Todd Rodgers, Qwest Robert Schafer, Verizon

The Network Interconnection Interoperability Forum (NIIF) provides an open forum to encourage the discussion and resolution, on a voluntary basis, of industry-wide issues associated with telecommunications network interconnection and interoperability which involve network architecture, management, testing, operations and facilitates the exchange of information concerning these topics. The NIIF consists of two standing committees: the Network Routing Resources Information Committee (NRRIC) and the Network Inter-Operability Committee (NIOC).

The NRRIC made significant progress addressing routing issues during 2007, including:

- Updating the Merger and Acquisitions document, which provides service providers with pertinent information when preparing for a merger or acquisition with another company, and the best method for industry notification.
- Revising the NIIF Reference Document, Part XII Terms and Definitions, for today's telephony environment.
- Addressing procedures for and impacts of switch and tandem rehomes and NXX (Central Office Code) code migrations not completed by the Local Exchange Routing Guide (LERG) effective dates.

¹ As indicated in Section 9, the glossary, the term "VRS User" refers to the deaf user of Video Relay Services.

2007 ATIS Committee Reports

The following NRRIC issues were completed in 2007:

- Substantive Updates to NIIF 0015, Inter-Company Responsibilities within the Telecommunications Industry. This document assists new and existing service providers with current requirements as the industry changes.
- Removal of Unnecessary Switching Entity Information from Public Access.

The NIIF NIOC is focusing on issues related to NGN technologies and convergence with the PSTN, Emergency Notification Systems (ENS) impacting network reliability, disaster recovery and other security issues. The NIOC is working many of these issues cooperatively with other industry committees such as PTSC, TMOC, TFPC, PRQC, AMATSG, ESIF, and OBF.

During 2007, the NIOC gathered a team of ENS subject matter experts, ENS municipal users, ENS service providers, and vendors to address the potential impacts that ENS have on the telecommunication networks.

The NIOC is continuing work on disaster recovery, interoperability and service restoration guidelines and has begun creating new guidelines, testing, and operational procedures related to NGN technologies and convergence issues. In addition, NIOC is addressing National Security/ Emergency Preparedness (NS/EP) calls which may encounter difficulties; call forwarding which could cause looping when VoIP technology is involved for some portion of the call; SS7 parameters to ensure that NS/EP calls are not degraded; and VoIP technology as it relates to network management control issues, high volume events, mass call blast impacts, and auto-dialer focused overloads.

2008 NIOC goals include developing solutions or educational guidelines for providers, users and vendors of ENS, and documenting operational procedures, guidelines and testing procedures for NGN and converged technologies.

BCSC: BAR CODE/STANDARD CODING COMMITTEE

Chair: Robert Fox, Telcordia Technologies Vice Chair: Bob Yanders, Qwest

The BCSC establishes industry standards for common shipping, package and product marking labels, product changes and software issuance standards. These standards simplify the receiving, shipping, transportation and tracking of products through company and industry business processes and the supply chain.

During 2007, the BCSC completed the following objectives:

- To further assist with understanding the difference between imaging and laser scanning, as well as to assist scanner manufacturers with supplying scanners that meet telecommunications industry requirements, the BCSC solicited additional scanner testing from companies using ATIS-0300085, *BCSC Test Specification for Product Label Scanning*. This testing helped participating BCSC companies determine issues and/or problems with the scanning of certain symbologies.
- BCSC worked with the ATIS TMOC-CLDR Committee to develop an ANSI standard for serialization based on the BCSC document, ATIS-0300078, Product Serialization Guideline, which will be published as ANS ATIS- 0300091, Serialization Standard for Telecommunication Network Infrastructure Equipment.
- Continued work on telecommunications industry requirements for Radio Frequency Identification (RFID) tags for use in the telecommunications supply chain.

In 2008, BCSC expects to:

- Continue developing specifications for RFID tags for products, packages, shipments, and returnable containers, as well as discuss other industry RFID requirements.
- Collect additional test results based on ATIS-0300085, *BCSC Test Specification for Product Label Scanning*, and report the findings collected.
- Review all BCSC documents and update their terminology, references and requirements, as determined by the committee. Changes to ATIS-0300038, *Product Marking Implementation Guideline*,

are expected to emphasize the requirement for two-dimensional (2D) symbols on telecommunications products.

• Future BCSC work may include development of guidelines for improving the telecommunications supply chain through a central database for end-to-end tracking of equipment and working with other standards committees to develop guidelines for standardized marking and tracking of hazardous materials in telecommunications products.

TMOC: TELECOM MANAGEMENT AND OPERATIONS COMMITTEE

Chair: Michael J. Fargano, Qwest Vice Chair: Ronald C. Roman, Telcordia Technologies

The Telecom Management and Operations Committee (TMOC) develops operations, administration, maintenance and provisioning (OAM&P) standards, and other documentation related to Operations Support System (OSS) and Network Element (NE) functions and interfaces for communications networks. The value of TMOC deliverables is seen in operations cost reductions, opening of markets, improved time-to-market for services, and scaling of services and operations. The end result is an efficient and effective multi-supplier and multiservice-provider telecommunications OAM&P environment.

The scope of the work in the committee includes the development of standards and other documentation for communications network operations and management areas. This work requires close and coordinated working relationships with other domestic and global standards development organizations and industry forums.

TMOC plays a key OAM&P standards development role for ATIS Board initiatives such as Convergence/NGN, Security, IPTV, and VoIP. This and other TMOC work is grouped into the following three major areas:

Common OAM&P Functionality and Technology Work Area

Current work efforts in this area provide for the common frameworks and models

that many or all inter-administration OAM&P standards and network technology specific OAM&P standards can utilize as a foundation. TMOC is the key contributor to ITU-T in this area. A key deliverable was the *Information & Communications Security for NGN Converged Services IP Networks and Infrastructure (ATIS-PP-0100014)* produced per the TOPS Council NGN work plan – and completed in collaboration with the ATIS Network Performance, Reliability, and Quality of Service Committee (PRQC) and the Packet Technologies and Systems Committee (PTSC).

Inter-Administration OAM&P Work Area

Current work efforts in this area provide for interoperability and intercommunications between service providers, i.e., IXC-LEC, CLEC-ILEC, etc. This work required a close collaboration with related industry fora. Some key deliverables were the (1) Revision of *T1.251 (e.g., for Company Codes) and Definition of Maintenance Agent Responsibility* and (2) *Serialization Standard for Telecommunications Network Infrastructure Products (ATIS-0300091.2007).*

Network Technology and/or Service Specific OAM&P Work Area

Current work efforts in this area provide for network technology specific OAM&P interoperability between and among service providers' and suppliers' systems. Key examples of work in this area are IPTV OSS Architecture and VoIP & IPTV Accounting Management. A key deliverable was the *High Level OSS/BSS Architecture for IPTV (ATIS-0300092)* – per CIO Council IPTV work request and developed in collaboration with the OBF.

Future (2008) TMOC Work

TMOC work efforts in 2008 are expected to include: (1) OAM&P aspects of cross-committee standards initiatives driven by the current and future ATIS TOPS Council and CIO Council initiatives (e.g., Convergence/NGN, IPTV initiatives); (2) Continued or expanded standards work on OAM&P aspects of VoIP and IPTV (e.g., API/Provisioning, Accounting Management), CLDR, and Trouble Administration.

2007 ATIS Committee Reports

Ordering and Billing

OBF: ORDERING AND BILLING FORUM

Co-Chairs: Dawn Kaplan, Telcordia Technologies Lonnie Keck, AT&T

The Ordering and Billing Forum (OBF), which is composed of twelve committees and seven subcommittees, provides a forum for representatives from the telecommunications industry to identify, discuss and resolve national and international issues which affect ordering, billing, provisioning and the exchange of information regarding access and other jointly provided services. Along with creating standards for traditional telephony services, the OBF continues to expand its focus to the development of intercarrier ordering and billing standards for new and future telecommunications technologies, e.g., Convergence and IPTV. A milestone was celebrated in the fourth quarter when current, as well as previous, participants and leaders came together to acknowledge the OBF's 100th General Session. This achievement represented significant work efforts since the OBF has responded to the needs of the industry by resolving over 3000 Issues in the last 22 years.

The OBF's Internet Protocol Network-to-Network Interface (IP-NNI) Committee collaborated with the ATIS Telecom and Management Operations Committee (TMOC) to advance a CIO Council priority initiative related to developing a High Level OSS/BSS Functional Requirements and Reference Architecture for IPTV standard, (ATIS-0300092). The publication offers support to IPTV service providers by helping them implement more flexible and costeffective operational platforms for new IPTV services, while producing greater operational efficiencies.

The OBF continues to progress its work related to the development of XML schemas for several of its standards documents. Efforts to date have included:

 The Unified Modeling Approach Joint Leadership Team (UMA-JLT) composed of OBF committee co-chairs led an effort to identify and endorse a common modeling tool for use by all relevant committees. In addition, the UMA-JLT finalized the publication of an updated OBF Guiding Principles document with the intent to share with other ATIS fora/ committees working on the development of XML schemas.

The Wireless Committee has supported the industry's move from Common Object Request Broker Architecture (CORBA) to XML by developing the Wireless Intercarrier Interface Specification (WICIS) 4.0.0 (ATIS-0409001-0400) with a sunrise date of September 14, 2008.

- The Electronic Data Interchange (EDI) Telecommunications Billing (ETB) Committee is also considering the benefits of converting to XML schemas.
- The Local Service Ordering and Provisioning (LSOP) Committee reached agreement to discontinue publication of new standards for the protocols that preceded XML in favor of maintaining only the schemas.

The Interconnection Service Ordering and Provisioning (ISOP) Committee developed a new Access Service Ordering Guidelines (ASOG) Practice and Form to facilitate the ordering for Virtual Concatenation Services (VCAT). The implementation of this process will allow customers to maximize the use of available network resources and will facilitate the provisioning and inventory of the customer's use of the SONET network.

As the OBF looks forward to 2008 and building on the success into its next hundred General Sessions, the list of initiatives continues to grow. Upcoming work efforts include the following:

- As part of the ATIS TOPS Council initiative on the convergence from wireline to wireless, the OBF has been named as the lead in coordinating and collaborating among all relevant ATIS fora/committees to help realize XML schema and modeling efficiencies for all standards activities.
- The IP-NNI Committee will continue its partnership with TMOC in addressing the next phase of the CIO Council work related to IPTV by addressing Ordering Application Program Interfaces (APIs).
- The LSOP and Wireless Committees will continue their efforts to help the industry address compliance with an FCC order related to local number portability.

• The Billing Committee will continue its efforts to address "phantom traffic" issues by enhancing the record specifications included in the Multiple Exchange Carrier Access Billing (MECAB) Document (ATIS-04001004-0009).

User Interface

ESIF: EMERGENCY SERVICES INTERCONNECTION FORUM

Chair: David Irwin, Washington Military Department First Vice Chair: Jim Shepard, HBF Group Second Vice Chair: Anna Hastings, AT&T

ESIF's primary focus is to provide a forum to facilitate the identification and resolution of technical and/or operational issues related to the interconnection of wireline, wireless, cable, satellite, and Internet services to emergency service networks. Issues are assigned to subcommittees that are formed to accomplish specific goals. Issue resolutions are often published in an official document (e.g., Technical Report, American National Standard, etc.) relating to interconnection with emergency services networks. Highlights for 2007 are as follows:

In February 2007, the Emergency Services Methodologies (ESM) Subcommittee published ATIS-0500010, Maintenance Testing Technical Report, which defines the requirements and testing procedures needed to perform wireless maintenance testing for accuracy, as well as the requirements and testing procedures needed for maintenance testing of end-to-end functionality in wireless E9-1-1 Phase 1 and Phase 2 systems. This document was the resolution of Issues 33 and 43. ATIS-0500011, Define Topologies and Data Collection Methodology Technical Report, was published to address the needs identified in Issue 44. These needs included defining the topologies in which representative location accuracy data should be aggregated, and defining the methodology to accomplish this data analysis.

The Emergency Call and Data Routing (ECDR) Subcommittee has been working on Issues 52 and 59. Issue 52 considers the various possible Alternate Routing Options during a 9-1-1 call when the normal call path is unavailable and seeks recommendations for the most appropriate alternate options. The Subcommittee has also been working on Issue 59, Development of a Recommended Formula for pseudo Automatic Number Identification (pANI) Allocation by Public Safety Answering Points (PSAPs) for wireless service providers. Diligent work is being done to ensure the efficient and effective use of pANI resources for Emergency Services Routing Key (ESRK) purposes. This work will define methods and/ or algorithms that will result in assignment or allocation in a manner that promotes conservation of these vital numbering resources.

In 2006, the Next Generation Emergency Service (NGES) Subcommittee was formed and adopted the previous Task Force 34 (TF34) work. In October 2007, ESIF published ATIS-0500012, Local Acquisition for Internet Access Networks in Support of Emergency Services. This Technical Report describes the specific areas of location acquisition in Internet Protocol (IP) access networks. It concerns itself with both the architectures and protocols for supporting these functions. In brief, the document is about the manner in which IP devices, such as Voice over Internet Protocol (VoIP) clients, obtain location information from an access network (location acquisition). In addition, ESIF initiated letter ballots on the following documents as candidate American National Standards:

- Emergency Information Services Interface (EISI) Implemented with Web Services (ATIS-0500007) provides a definition of web services implementation for an Emergency Services Network (ESNet).
- EISI Automatic Location Information (ALI) Service (ATIS-0500006) provides a service definition of an XML ALI service for an ESNet.
- Emergency Services Messaging Interface (ESMI) (ATIS-0500002) is the evolution of the ESNet that provides sophisticated and robust services to the PSAP and other authorized agencies.

During the summer of 2007, ATIS and ESIF submitted comments in reply to the FCC Notice of Proposed Rulemaking (NPRM) regarding Wireless E911 Location Accuracy Requirements. In its submission, ATIS advised the FCC that ESIF had developed standards that would help to support the location accuracy needs of the industry. In addition, ATIS and ESIF supported the establishment of an open

2007 ATIS Committee Reports

forum or committee consisting of interested stakeholders, to conduct an assessment on the feasibility of developing a single location accuracy standard.

To date ESIF has reviewed 59 proposed issues for consideration; seven major issues are actively being worked. ESIF looks forward to building on its success over the past year in even more effective and groundbreaking ways in 2008.

Circuit Switched & Plant Infrastructure

05: ACCREDITED STANDARDS COMMITTEE 05 – WOOD POLES AND WOOD PRODUCTS

Chair: Nelson G. Bingel III, Osmose Utilities Services, Inc.

Accredited Standards Committee O5 (ASC O5) is responsible for developing standards for a portion of the telecommunication outside plant including wood poles and crossarms. ASC O5 membership consists of a balance from three perspectives within the industry: wood pole producers, pole users and general interest.

During 2007, a three-year task force to obtain circumference measurements from poles during the manufacturing process completed its work. With the cooperation of pole manufacturers from the major pole producing sections of the country, data were obtained on over 23,000 poles. These pole dimension data were used to complete a derivation of fiber strength values that is a refinement to the current values to be published in the revision of ANSI 05.1-2002: Wood Poles – Specifications and Dimensions.

The 2006-2007 review effort completed by the Fiber Stress Subcommittee resulted in proposed language for the standard that more clearly addresses the maximum stress point above groundline, the fiber stress height effect, and multi-pole structures. The revision of ANSI O5.1-2002 currently is in the balloting process and should result in the publication of a revision of ANSI O5.1-2002 before the end of the year.

The other major focus during 2007 was an evaluation of test data received from the Electric Power Research Institute (EPRI) for several species of tropical hardwood poles from Brazil. One interesting potential benefit to the tropical species is that no preservative treatment will be required. A special meeting of the Foreign Species task force and representatives from the tropical hardwood proponents was held mid-year and it was decided to initiate activity to create a new ASC O5 standard that only addresses tropical hardwood species. ASC O5 has issued a letter to the industry that states the range of fiber strength values that are contained in the pole break test data can be used against the tropical hardwood species for those interested in using such hardwoods for pole use.

NIPP: NETWORK INTERFACES, POWER, AND PROTECTION

Chair: Ed Eckert, Ikanos Communications Vice Chair: Kevin Sievert, Verizon

The Network Interfaces, Power, and Protection Committee (NIPP) develops standards and technical reports related to interfaces associated with user access to the public telecommunication networks, power systems, and electrical and physical protection of the network.

The Value to the Telecommunications Industry

NIPP Committee develops standards and technical reports in two diverse areas of interest: (1) network access interfaces including analog and digital, focusing this year on an access interface for IPTV and (2) power systems and their interfaces and the electrical and physical protection of the network. Globally, NIPP provides significant input to the ITU-T SG 15 to ensure the needs of the U.S. industry on DSL and to maintain liaison contacts with other bodies such as the DSL Forum and Telecommunication Industry Assocation (TIA).

Optical Access Networks, NIPP-OAN

The NIPP-OAN was commissioned in 2007 by the TOPS Council's Optical Access Networks Focus Group (OAN-FG) to progress several of the action items in the FG's OAN Assessment and Work Plan. NIPP-OAN develops and maintains standards, technical requirements, and technical reports for systems and associated interfaces for optical access to telecommunications networks (e.g., G-PON). The work of the NIPP-OAN focuses on physical and transmission convergence layer functionality, but also includes higher layer functionality such as equipment management, traffic management, and system-level issues related to optical access networking equipment. NIPP-OAN also makes recommendations to NIPP on matters related to optical access before U.S. and international standards organizations.

Network Access Interfaces, NIPP-NAI

As the copper access technology choice for the important IPTV market, VDSL2 can offer rates up to 100 Mbps in both the upstream and downstream directions. With this in mind, the experts in NIPP-NAI continued their focus on VDSL2. The NIPP NAI also worked with TIA on text to be included in TIA-968 regarding harms prevention for DSL. In addition, the NIPP NAI continues to progress work on issues related to splitters for VDSL.

The work on Dynamic Spectrum Management (DSM) was completed in May 2007 with the publication of *Dynamic Spectrum Management* (ATIS-PP-0600007). DSM provides dynamic spectrum management information for the administration of services and technologies that use metallic subscriber line cables.

Network Power Systems, NIPP-NPS

In December 2007, the NIPP-NPS published Voltage Levels for DC Powered Equipment Used in the Telecommunications Environment (ATIS-PP-0600315.2007). The NIPP-NPS is also continuing to make progress on revising DC Power Wire and Cable for Telecommunications Power Systems.

The NIPP-NPS formed an Energy Efficiency Working Group in 2007. The EEWG is progressing work on the release of an output document to address energy efficiency. It is expected that the EEWG will become a full NIPP Subcommittee in 2008.

Network Electrical Protection, NIPP-NEP

NIPP-NEP continues their collaboration with Underwriters Laboratories on UL 2444, Safety Requirements for Network Equipment and UL 60950, Safety of Information Technology Equipment. The NIPP-NEP published Grounding and Bonding of Telecommunications Equipment and Protection of Telecommunications Links from Physical Stress and Radiation Effects (ATIS-PP-0300333.2007) in May 2007 and Associated Requirements for DC Power Systems – A Baseline Standard (ATIS-PP-0600328.2007) in July 2007.

Network Physical Protection, NIPP-NPP

The NIPP-NPP has continued to make progress regarding *Restriction of Hazardous Substances (RoHS)* through the RoHS Ad-Hoc Committee which is part of a global effort by several international SDOs on reducing hazardous wastes. NIPP-NPP also formed and supported a Lead-Free Working Group which proposes, develops and recommends standards and technical reports relating to the use of lead or the restriction of lead in solder used in the manufacturing of telecommunications network equipment.

In October 2007, the NIPP-NPP published Temperature, Humidity & Altitude Standards (ATIS-PP-0600010.2007) and Fire Resistance Criteria - Ignitability for Equipment Assemblies, Ancillary Non-Metallic Apparatus (ATIS-PP-0600307). In May 2007, NIPP-NPP published RoHS - Compliant Plating standard for Structural Metals, Bus Bars and fasteners (ATIS-PP-0600009.2007).

Wireless

WTSC: WIRELESS TECHNOLOGIES AND SYSTEMS COMMITTEE

Chair: Don Zelmer, AT&T Vice Chair: Mark Younge, T-Mobile

The Wireless Technologies and Systems Committee (WTSC) develops standards and technical reports and transposes specifications related to 2G, 3G, and evolved 3G wireless services and systems, as well as those for Wireless Wideband Internet Access systems. WTSC is the primary ATIS committee in the Third Generation Partnership Project (3GPP), a global federation of regional Standards Development Organizations (SDOs) targeted at evolving the GSM specifications to 3G and beyond. WTSC teams worked with other ATIS committees and external SDOs to develop joint standards on issues common to wireless and wireline

2007 ATIS Committee Reports

networks and services (i.e., Common IMS and NGN).

WTSC also provides a platform for addressing North American regulatory issues such as Commercial Mobile Alerts Service, Lawfully Authorized Electronic Surveillance (LAES), and Multimedia Priority Service. Current work includes developing North American requirements/standards to support LAES for wireless VoIP services.

There are currently four technical subcommittees operating in WTSC:

- WTSC-G3GRA (Radio Aspects of GSM/3G and Beyond)
- WTSC-G3GSN (Mobile/Wireless GSM/3G System and Network)
- WTSC-WWINA (Wireless Wideband Internet Access)
- WTSC-LI (Lawful Intercept)

Third Generation Mobile Wireless and Beyond

Third generation mobile wireless work continues to be WTSC's primary area of focus. As the lead ATIS committee to 3GPP, WTSC continues to work on the standardization of all aspects of GSM, UMTS, and Evolved Packet System (EPS) technologies. These work aspects include:

- Radio Access (e.g., EDGE, W-CDMA, HSPA, etc.)
- Core Network (i.e., IMS)
- User Equipment (i.e., Terminals and User Identity Modules)
- Systems and Services (e.g., VoIP, MMS, MBMS, etc.)

WTSC experts work in 3GPP Technical Specifications Groups (TSGs) generating deliverables that are ultimately transposed by WTSC into ATIS standards and specifications for implementation and deployment in North America.

Work with other ATIS Committees and external SDOs

WTSC, co-located with GSM North America (GSMNA), met jointly with the GSMNA Standards Working Group several times this year to provide overviews and updates of work, and to allow feedback to be provided on a variety of activities in the 3GPP TSGs, IETF, and ITU. WTSC also generated ATIS' inputs to the ITU Recommendations on IMT-2000 services and systems generated by ITU-T SG 19 and ITU-R WP 8F. This year, WTSC completed the transposition of the M.1457-6 update to ITU-R WP 8F and submitted and obtained approval of update material for TDMA-SC for Revision 7 and 8 of M.1457. At times. WTSC liaises and works with LAES and NGN standardization activities jointly with TIA TR45 and ATIS PTSC to ensure uniformity across access technology lines within North America.

Wideband Wireless Internet Access

WTSC continues to develop air interface standards to support Wideband Internet Access. This year WTSC balloted an update to the High Capacity-Spatial Division Multiple Access (HC-SDMA) Standard (ATIS-0700004-2005) specifically oriented towards enhanced network interfaces. It is anticipated that some of these changes will flow over to IEEE 802.20 to be included in the proposed IEEE 802.20 draft standard which will initiate IEEE Sponsor ballot this year.

Lawful Intercept

During 2007, WTSC-LI published a LAES standard for 3GPP IMS-based VoIP and other Multimedia Services. This standard defines the requirements for interfaces between the service provider and law enforcement agencies for VoIP calls in a LAES environment. WTSC will continue to work on issues related to LAES for Push-to-Talk over Cellular (POC) and Server-Based Conferencing.

Work in 2008

In 2008, WTSC will remain active within the framework of the 3GPP to further enhance the evolution of the GSM System to 3G and beyond and support its influence on NGN, as well as independently develop additional Wireless Wideband Internet Access standards. WTSC G3GRA will be working with TIA TR45 on coexistence and interference issues in Land Mobile systems. WTSC G3GSN will also work jointly with TIA TR45.2 in 2008 on the development of a joint standard in support of interfaces to provide Commercial Mobile Alerts Service (CMAS). G3GSN is also working on a separate ATIS standard to support an interface unique to GSM/UMTS for CMAS.

IOC: IMSI OVERSIGHT COUNCIL Chair: Gary Richenaker, Telcordia Technologies

The IMSI Oversight Council (IOC) is an open industry council of telecommunications companies and other organizations with a direct interest in the management of International Mobile Subscriber Identity (IMSI) codes. An IMSI is a 15-digit number used within mobile phones that allows service operators to identify mobile terminals for purposes of international roaming. The IOC is responsible for overseeing the management of IMSI codes that have been assigned to the U.S. and its possessions as authorized by the U.S. Department of State since 1996.

The IOC maintains the IMSI Assignment and Management Guidelines and Procedures to ensure that the guidelines meet the evolving needs of the U.S. wireless telecommunications industry and continues to reflect ITU Recommendation E.212. The IMSI Assignment and Management Guidelines and Procedures contain the guidelines and procedures for the assignment and use of IMSIs in the U.S. with consideration given to other North American Numbering Plan (NANP) countries. The IOC directly manages and oversees the assignment of the Home Network Identifier (HNI) portion of IMSIs used in the U.S. through an IMSI-Administrator (IMSI-A) (currently performed by Telcordia Technologies).

Multimedia

IIF: IPTV INTEROPERABILITY FORUM Chair: Dan O'Callaghan, Verizon Vice Chair: Richard Brand, Nortel

Established as a result of the priority work of the ATIS Board of Directors, the IPTV Interoperability Forum (IIF) develops ATIS standards designed to enable the deployment of IPTV systems and services, including video on demand and interactive TV services. The IIF has more than 45 participating companies.

In 2007, the ATIS IPTV Interoperability Forum led the world's standards bodies in addressing IPTV, publishing five documents: ATIS-0800005 IPTV Packet Loss Issue Report, ATIS-0800006 IIF Default Scrambling Algorithm, ATIS-0800007 IPTV High Level Architecture, ATIS 0800008 QoS Metrics for Linear Broadcast IPTV, and ATIS 08-0800011 QoS Metrics for Public Services, and driving global standardization efforts through its pivotal contributions to the ITU-T's Focus Group on IPTV. In addition, the IIF brought to near completion its phase one work program, making significant progress on 17 additional documents which will allow standardized deployment of linear broadcast services over IPTV.

In 2008, the IIF will build on its 2007 deliverables to complete its specifications for the standardization of linear broadcast IPTV, addressing network/service attachment; service discovery; basic navigation through services; and regulatory compliance, including Emergency Alert Services (EAS), Closed Caption and Parental Advisory, with completion targeted for second quarter 2008. A second phase of specifications will address video-on-demand (VOD) and pay-per-view (PPV) transaction-based services. QOS standards on IPTV QOS Metrics for VoD and IPTV Fault Modes, IPTV Security Interoperability Standards on Secure Download, Security Robustness, and Certificate of Trust Management Hierarchy are also scheduled for completion in 2008. Phase three, scheduled for 2009, will address Interactive TV, multiplayer games, Network Personal Video Recorder, and in-home peer-to-peer interaction.

Optical

OPTXS: OPTICAL TRANSPORT AND SYNCHRONIZATION COMMITTEE

Chair: John McDonough, NEC Corporation of America Vice Chair: Ken Biholar, Alcatel-Lucent

OPTXS develops and recommends standards and prepares technical reports related to telecommunications network technology and more specifically pertaining to network synchronization interfaces and hierarchical structures for U.S. telecommunications networks. OPTXS focuses on those functions and characteristics necessary to define and establish the interconnection of signals that comprise network transport, including aspects of both asynchronous and synchronous networks. OPTXS also makes recommendations on related subject matter under consideration in various North American and international standards organizations.

OPTXS-Synchronization (SYNC) Subcommittee

OPTXS-SYNC develops standards on synchronization for optical and electrical transport systems and coordinates closely with the equivalent ITU-T groups. These standards provide interface requirements to allow various network operators to interconnect.

In 2007, OPTXS-SYNC finalized a technical report that serves as an introduction to synchronization issues in packet networks, such as the synchronization-related problems with DS1 circuit emulation over packet networks.

During the upcoming year, OPTXS-SYNC plans to continue the work on synchronization and packet networks and help shape the forthcoming ITU-T synchronization documents.

OPTXS-Optical Hierarchical Interfaces (OHI) Subcommittee

OPTXS-OHI prepares technical reports pertaining to optical network hierarchical structures. OHI focuses on those functions and characteristics necessary to define and establish the interconnection of optical signals comprising network transport. OHI also prepares recommendations on related subject matter under consideration in various North American and international standards organizations.

North American Input to International Standards

To meet its objective of ensuring that North American requirements are met in international standards development, OPTXS has the role of the U.S. Technical Advisory Group for North American input to Questions 3, 9, 11, 12, 13, and 15 of ITU-T Study Group 15. OPTXS serves an important role in coordinating input to ensure that the North American position will be reflected in the completed ITU-T standards.

OPTXS-OHI produced and forwarded to the ITU-T Study Group 15 a set of contributions (one U.S. position, seven company/multi-company contributions, and twelve rapporteur and editor documents). Key topics included are as follows:

- Ultra-high speed interfaces and services, specifically related to evolution of the OTN to transport 100 Gb Ethernet under development in IEEE 802.3
- The Generic Framing Procedure (GFP), including enhancements for support of MCC (Management Communication Channel), SCC (Signaling Communication Channel), and mechanisms for transferring far end fault information across transport networks for certain Ethernet physical interfaces
- Network architecture, including the new Unified model (UFATN) for network architecture
- Optical Control Plane, including revisions to G.8080
- Ethernet Services, including the new Ethernet Virtual Rooted Private Multipoint Service
- Terminology

Packet Based Networks

PTSC: PACKET TECHNOLOGIES AND SYSTEMS COMMITTEE

Chair: Joe Zebarth, Nortel Vice Chair: Vacant

The Packet Technologies and Systems Committee (PTSC) develops standards, technical specifications and technical reports for new packet architectures and applications for enabling signaling protocols.

Key deliverables for PTSC during 2007 include the following:

IP to IP Network Interconnection

IP Network to Network (NNI) standards facilitate interconnection between IP networks and IP business applications. IP NNI standards also facilitate the convergence of wireline and wireless network services as well as the migration of existing services and customer premise equipment into an IP environment. In 2007, ATIS PTSC published requirements for NGN Architecture and service continuity between access networks. PTSC also drafted additional agreements and initiated letter ballots for session border control functions and operator services.

Lawfully Authorized Electronic Surveillance (LAES)

LAES standards allow carriers to meet regulatory LAES requirements as well as CALEA (Communications Assistance for Law Enforcement Act) requirements. In 2007, PTSC focused on developing a LAES standard for Internet Access and Services (IAS Broadband Data), a service provider job aid to assist in the implementation of IAS, a recommendation for data buffering (Short Term Storage) performance in a LAES environment, and a supplement to ATIS-10000678.2006 - Lawfully Authorized Electronic Surveillance (LAES) for Voice over Packet Technologies in Wireline Telecommunications Networks. Work is also ongoing on developing LAES capabilities for Network Based Conferencing and the Next Generation Network.

Network Security

In 2007, PTSC developed standards for Network to Network (NNI) Signaling and Control Security for Evolving VoP/Multimedia Networks. A standard for User to Network (UNI) Signaling and Control Security for Evolving VoP/Multimedia Networks was letter balloted. PTSC also worked to develop an identity management standard, which it anticipates will be completed in 2008.

Emergency Telecommunications Service (ETS)

Emergency Telecommunications Service (ETS) has long been an important service for the U.S. government and must be provided in the new IP environment. The IP environment requires redesign of the ETS features to fit them in the new modes of operation. In 2007, the ETS Packet Priority for IP NNI Interfaces - Requirements for a Separate Expedited Forwarding Mechanism and the ETS Phase 1 Network Element Requirements document were letter balloted. With the completion of this work, PTSC will develop the ETS Phase 1 Network Element Requirements which will complete in the latter part of 2008.

Interoperability

In 2007, PTSC developed a Session Initiation Protocol (SIP) UNI Testing Framework standard. It is anticipated that this work will be completed by 2008.

Other ATIS Programs

ACTA: ADMINISTRATIVE COUNCIL FOR TERMINAL ATTACHMENTS

Chair: Jim Haynes, Uniden Engineering Services

The Federal Communications Commission (FCC) established the Administrative Council for Terminal Attachments (ACTA) in 2000 to take over the FCC's administrative duties with respect to maintaining technical criteria for connecting terminal equipment to the Public Switch Telephone Network (PSTN) pursuant to Part 68 of the FCC's Rules. ATIS and the Telecommunications Industry Association (TIA) co-sponsor the ACTA. ATIS provides the secretariat administration and legal counsel to the ACTA.

In 2007, the ACTA took steps to reorganize its industry and user representation on the Council to better reflect the changing technologies and applications with the telecommunications industry. In making this change, ACTA also made modifications to its Operating Principles and Procedures to ensure that all industry and user segments were appropriately represented. Continuing improvements in the quality of the information contained in the ACTA database also was a key component to the activities of ACTA.

Continued process improvements and instructions to the ACTA Online Filing (AOF) system for submitting telephone terminal equipment to the ACTA database, the response of the ACTA to the technical needs of the industry, and the expedited process by which technical criteria is made available to the industry show the steps being taken by the ACTA to present a model for the privatization of compliance functions.

In 2008, ACTA will continue to work closely with the FCC to ensure industry compliance with federal regulations, especially in the proper labeling criteria for newly emerging telephone equipment. ACTA also will continue its outreach to other industry forums and foreign authorities concerned with terminal equipment and monitor standards and regulations relevant to ACTA's mission and scope.

AISP.4-HAC: ATIS INCUBATOR SOLUTIONS PROGRAM #4 (AISP.4) HEARING AID COMPATIABILITY

Chair: Mary Jones, T-Mobile Vice Chairs: Steve Coston, SonyEricsson Ron Scicluna, HIA

The ATIS Incubator Solutions Program #4 (AISP.4) Hearing Aid Compatibility (HAC) investigates performance between hearing aids (HAs) and Wireless Devices (WDs) and determines methods of enhancing interoperability and usability for consumers with hearing aids, in response to the Federal Communications Commission (FCC) *Report & Order* for WT Docket No. 01 - 309, RM 8658.

In 2007, the AISP.4-HAC developed a comprehensive agreement between the representatives of hard of hearing consumers and the wireless industry. This agreement served as the foundation for the FCC's reconsideration of the requirements found in the *Report & Order*, which mandated that 50% of all new WDs sold meet minimum HAC ratings for RF interference. The ATIS joint consensus agreement provided a comprehensive alternative to the then-existing 50% mandate while assisting those with greater hearing loss by increasing numbers of hearing aid compatible phones.

During 2008, the AISP.4–HAC will investigate the impact of volume control on hearing aid wearers as well as continue its outreach efforts to inform consumers about new requirements and technologies.

ISSI: IP-BASED SEPARABLE SECURITY INCUBATOR Chair: Michael Nawrocki, Verizon Vice Chair: Tony Aoki, Sony

The ATIS Incubator Solutions Program #5 (AISP.5)—IP-based Separable Security Incubator (ISSI)—responds to the need for IP-based separable security solutions in the emerging IPTV market to meet the objectives set forth by the Federal Communications Commission in CS Docket No. 97-80. The ISSI's mission is to provide solutions for two issues facing the industry:

 An enhanced CableCard specification as defined in SCTE-28 that will enable IP flows agnostic to the network technology of the service/network provider. This will ensure that the physically separable solution is harmonized with and backwards compatible to the existing unidirectional CableCard standard; and

2. A common target platform for a downloadable security functionality that eliminates the abovementioned physical device while meeting the security criteria defined in FIPS 140-2.

The ISSI focused its initial efforts on the development of a specification for a Point Of Deployment (POD) module akin to the CableCARD, called the ATIS POD (or APOD) module. In 2008, the ISSI will work towards the demonstration of an APOD device and will pursue its second objective for an IP-based downloadable security function.

PEG: PROTECTION ENGINEERS GROUP Chair: Richard Chadwick, AC Data Systems

The Protection Engineers Group (PEG) is comprised of specialists who share a common interest in the electrical protection of critical communications infrastructure. PEG's primary goals are to encourage the interaction and free-flow of ideas among electrical protection specialists and to be a resource of industry experience.

Survivability of communications infrastructure represents not just a business issue, but a critical public safety and homeland security issue. PEG's annual conference provides protection specialists the opportunity to interact with a group of experts with handson electrical protection experience. Technical presentations cover both the basics of protection, as well as protection issues for current and next generation broadband communications infrastructure. The conference setting provides a networking opportunity, and the conference's vendor demo offers a venue where vendors may present and demonstrate their services and equipment and see the very latest in protection equipment manufacturers.

The ATIS 2007 PEG Conference met in Westminster, Colorado in late February 2007. The theme–Coordinating Electrical Protection with Broadband Infrastructure–served as a continuation of the prior year's theme entitled Electrical Protection of Broadband Networks. The program featured presentations on such topics as the following: Cell Site Electrical Protection Issues; Power Distribution Systems and Metallic Cable; High Bandwidth, High Value Triple Play Protection; Broadband Radio Installation; and Power Over Ethernet. Donald Turner, Corning Cable Systems, received an award for the best paper and PEG 2006 presentation on "The Impact of Surge Protectors on DSL Triple Play Services."



ALLIANCE FOR TELECOMMUNICATIONS INDUSTRY SOLUTIONS

BOARD OF DIRECTORS

MEMBERS

TOPS COUNCIL	• VoIP • NGN • Network Security • Data Interchange • Wide Area Ethernet	 Mobile Wireless Services IPv6 Wireless/Wireline Convergence FTTx/Optical Access Networks Broadband Services 	 NGN Identity Management Inter-Carrier VoIP Call Routing NGN Carrier Interconnect Service Oriented Networks Home Networking 	
CIO COUNCIL	 National Diversity A Diversity Assurance 	ssurance Initiative Analysis		

ATIS COMMIT

UNIVERSAL FUNCTIONS PEEFCORMANCE RELABILITY S INTEROPERABILITY DAMSP DPDERING S BILLING USER INTERFACE PROC Network Performance Reliability and Quality of Service Committee PTSC add Systems Committee NIOAF Network Integration, Operations and Administration Forum OPF Ordering and Billing Forum ESF Emergency Services Interconnection Forum TPC Telecommunications Fraud Prevention Committee PASC NIF Network Reliability Steering Committee NIF Network Interconnection Interconnection Interconnection Interconnection Interconnection Interconnection Security Committee TV NSC Information and Data Security Committee NIF Network Interconnection Intercon				2.51	
PERFORMANCE RELIABILITYINTEROPERABILITYDAMSPDRDEFINIS & BILLINGUSER INTERFACEPROC Network Reformance CommitteePTSC Packet Technologies ad Systems CommitteeNIOAF Network Integration, Operations and Administration ForumOBF Offering and Billing ForumESIF Emergency Services Interconnection ForumTFPC Telecommunications Fraud Prevention CommitteePacket Technologies ad Systems CommitteeNetwork Integration, Operations and Administration ForumOBF Offering and Billing ForumEmergency Services Interconnection ForumNRSC Information and Data Security CommitteeNIII Fetwork Interconnection Interconnection Interconnection Interconnection Interconnection TOCOBF Offering and Billing ForumEmergency Services Interconnection ForumIDSC Information and Data Security CommitteeIDSC Information and Data Security CommitteeTMOC Telecom Management and Operations CommitteeTMOC Telecom Management and Operations CommitteeTMOC Telecom Management and Operations CommitteeTMOC Telecom Management and Operations CommitteeTMOC Telecom Management and Operations CommitteeESIF Billing Forum		UNI	ERSAL FUNCT	IONS	
PROC Network Performance Reliability and Quality of Service CommitteePTSC Packet Technologies and Systems CommitteeNIOAF Network Integration, Operations and Administration Forum INC Industry Numbering CommitteeOBF Ordering and Billing ForumESIF Emergency Services Interconnection ForumTFPC Telecommunications Fraud Prevention CommitteeINCIndustry Numbering CommitteeOBF Ordering and Billing ForumESIFNRSC Network Reliability Steering CommitteeINCInteractive Voice Response Accessibility ForumINF Text Telephony ForumDSC Information and Data Security CommitteeINOC Telecom Management and Operations CommitteeTMOC Telecom Management and Operations CommitteeINO	PERFORMANCE RELIABILITY & SECURITY	INTEROPERABILITY	OAM&P	ORDERING & BILLING	USER INTERFACE
	PRQC Network Performance Reliability and Quality of Service Committee TFPC Telecommunications Fraud Prevention Committee NRSC Network Reliability Steering Committee IDSC Information and Data Security Committee	PTSC Packet Technologies and Systems Committee	NIOAFNetwork Integration, Operations and Administration ForumINCIndustry Numbering CommitteeINCIndustry Numbering CommitteeIITCInternetwork Interoperability Test Coordination CommitteeNIIFNetwork Interoperability ForumBCSCBar Code/Standard Coding CommitteeTMOCTelecom Management and Operations Committee	OBF Diality Forum	<section-header><text><text><text><text></text></text></text></text></section-header>

COMMITTEES & FORUMS

STAFF

TEES & FORUMS

FUNCTIONAL PLATFORMS

CIRCUIT SWITCHED & PLANT INFRASTRUCTURE	WIRELESS	MULTIMEDIA	OPTICAL	PACKET BASED NETWORKS
OS Committee OS NIPP Network Interface, Power and Protection Committee	WIRELESS Wireless Technologies and Systems Committee IOC IMSI Oversight Council	IIF IPTV Interoperability Forum	OPTICAL OPTXS Optical Transport and Synchronization Committee	PTSC Packet Technologies and Systems Committee

ATIS Standards and Documents 2007

Document Name	Document Number
IPTV DRM Interoperability Requirements	ATIS-0800001.v002
Unified Ordering Model - Access Service Request (UOM-ASR) Volume I - Business Requirements for Access Service Ordering Guidleines (ASOG) Version 34	ATIS-0404110-0009
Access Service Request Mechanized Interface Specifications Version 34	ATIS-0404100-0034
Access Service Ordering (ASR) Guidelines Version 34	ATIS-0404000-0034
Unified Ordering Model (UOM) Volume III - Design For Access Service Ordering Guidelines (ASOG) Version 34	ATIS-0410003-0009
Unified Ordering Model (UOM) Volume II - Analysis Issue 9 For Access Service Ordering Guidelines (ASOG) Version 34	ATIS-0410002-0009
Network Interconnection Interoperability Forum (NIIF) Reference Document	ATIS-0300008
NIIF Reference Document Part I- Installation and Maintenance Responsibilities for Special Access Services, WATS Access Lines, and Switched Access Services Feature Group "A"	ATIS-0300009
NIIF Reference Document Part II- Installation and Maintenance Responsibilities for Switched Access Services Feature Groups "B," "C," and "D"	ATIS-0300010
NIIF Reference Document Part III- Attachment B- ISUP Compatibility Tests	ATIS-0300013
NIIF Reference Document Part III- Attachment C- SCCP Protocol Class 0 Compatibility Tests	ATIS-0300014
NIIF Reference Document Part III- Attachment D- Test Severity Analysis Criteria	ATIS-0300015
NIIF Reference Document Part III- Attachment E- SS7 Network Gateway Screening	ATIS-0300016
NIIF Reference Document Part III- Attachment F- SS7 ISUP Tests for ISDN Network Interconnection	ATIS-0300017
NIIF Reference Document Part III- Attachment G- SS7 Link Diversity Validation Guidelines	ATIS-0300018
NIIF Reference Document Part III- Attachment H- SS7 Cause Codes and Tones and Annoucements	ATIS-0300019
Installation, Testing & Maintenance Responsibilities for SS7 Links and Trunks, Part III - Attachment I SS7 Network Security Base Guidelines	ATIS-0300020
NIIF Reference Docuemtn Part III- Attachment J- SS7 Software Validation	ATIS-0300021
NIIF Reference Document Part III- Attachment K- SS7 Link Diversity Validation Guidelines	ATIS-0300022
NIIF Reference Document Part IV- Installation and Maintenance Responsibilies for X.75 Gateway Services	ATIS-0300023
NIIF Reference Document Part V- Test Line Guidelines	ATIS-0300024
NIIF Reference Document Part V- Attachment A- Test Line Directory Dictionary	ATIS-0300025
NIIF Reference Document Part VI- Network Management Guidelines	ATIS-0300026
NIIF Reference Document Part VI- Attachment A- Emergency SS7 Restoration Operations Planning Considerations	ATIS-0300027
NIIF Reference Document Part VII- Information Sharing	ATIS-0300028
NIIF Reference Document Part VIII- Cable Locate Guidelines	ATIS-0300029
NIIF Reference Document Part IX- Installation, Testing, and Maintenance Responsibilities for Facilities	ATIS-0300030
NIIF Reference Document Part IX- Attachment A- SONET Facilities	ATIS-0300031

Document Name	Document Number
NIIF Reference Document Part X- Interconnection Between LECs- Operations Handbook Local Interconnection Service Arrangement	ATIS-0300032
NIIF Reference Document Part X- Attachment A- Security Guidelines	ATIS-0300033
NIIF Reference Document Part XI- Local Number Portability Interconnection Testing	ATIS-0300034
NIIF Reference Document Part XII- Toll Free Industry Test Plan	ATIS-0300035
NIIF Reference Document Part XIII- Terms and Definitions	ATIS-0300036
Equal Access Subscription-Customer Account Record Exchange (CARE) Issue 18	ATIS-0408000-1800
EDI LSOG Mechanization Specification (ELMS 14)	ATIS-OBF 0402000-0014
IIF Default Scrambling Algorithm (IDSA) Interoperability Specification	ATIS-0800006
Lawfully Authorized Electronic Surveillance (LAES) For Internet Access and Services	ATIS-1000013.2007
Unified Ordering Model (UOM) Volume II Business Requirements - Analysis For Access Service Ordering Guidelines (ASOG) Version 35	ATIS-0410002-0010
Unified Ordering Model (UOM) Volume III - Design For Access Service Ordering Guidelines (ASOG) Version 35	ATIS-0410003-0010
Access Service Request (ASR) Guidelines Version 35	ATIS-0404000-0035
Access Service Request (ASR) Mechanized Interface Specifications ASR Version 35	ATIS-0404100-0035
Unified Ordering Model - Access Service Request (UOM-ASR) Volume I Business Requirements For Access Service Ordering Guidelines (ASOG) Version 35	ATIS-0404110-0010
Battery Enclosure and Rooms/Areas	ATIS-PP-0600003.2007
OAM&P - Extension to Generic Network Model for Interfaces across Jurisdictional Boundaries to Support Service Test Function	ATIS-PP-0300262.2007
Priority for NS/EP Services in NGN/IP Environment - Role of TSP	ATIS-PP-0100011
Security for Next Generation Networks - An End User Perspective	ATIS-PP-0100010
High Capacity - Spatial Division Multiple Access (HC-SDMA) Radio Interface Standard.	ATIS-PP-0700004.2007
Unified Ordering Model (UOM) Volume I, II, III, IV - Business Requirements Wireless Intercarrier Communications Interface Spcifications (WICIS) for Number Portability Version 4.0.0	ATIS-0409001-0400
Network to Network (NNI) Standard for Signaling and Control Security for Evolving VoP Multimedia Networks	ATIS-PP-1000019.2007
NGN Architecture	ATIS-PP-1000018
IPTV High Level Architecture	ATIS-0800007
Lawfully Authorized Electronic Surveillance (LAES) - Addendum 2 - Support for Carrier Identity	J-STD-025-B-2
OAM&P - Models for Interfaces Across Jurisdictional Boundaries to Support Service Level Connection Management	ATIS-PP-0300263.2007
Supplement to ATIS-1000678.a.2007 - LAES for Voice over Packet Technologies in Wireline Telecommunication	ATIS-PP-1000678.a.2007
Synchronization of Packet Networks	ATIS-PP-0900001
Defects Per Million (DPM) Metric for Transaction-Based Services such as VoIP	ATIS-PP-0100008.2007

ATIS Standards and Documents 2007

Document Name	Document Number
Enhanced Wireless 9-1-1 Phase II (Joint TIA/ATIS ANS)	ANSI/J-STD-036-B
Identification of Physical Network resources	ATIS-PP-0300007.2007
Supplement to T1.211-2001(R2006), Information Interchange - Structure and Coded Representation of Nation Security Emergency Preparedness (NS/EP) Telecommunication Service Priority (TSP) Codes for the North American Telecommunications Systems	ATIS-PP-0300211.a.2007
Codes for Identification of Service Provided for Information Exchange	ATIS-PP-0300251.2007
Dynamic Spectrum Management	ATIS-PP-0600007
Grounding and Bonding of Telecommunications Equipment	ATIS-PP-0300333.2007
RoHS - Compliant Plating standard for Structural Metals, Bus Bars and fasteners	ATIS-PP-0600009.2007
Maintenance Testing	ATIS-0500010
Location Technology Performance Data - Define Topologies & Data Collection	ATIS-0500011
Operations, Administration, Maintenance, & Provisioning (OAM&P) - Model Interface Across Jurisdictional Boundaries to Support the Local Service Inquiry Functions (LSOG 11)	ATIS-0410500-0004
Unified Ordering Model Volume II – Analysis (LSOG 12)	ATIS-0412003-0004
Unified Ordering Model Volume III – Design: Issue 4 for Local Service Ordering Guidelines (LSOG) Version 12	ATIS-0412002-0004
Protection of Telecommunications Links from Physical Stress and Radiation Effects and Associated Requirements for DC Power Systems (A Baseline Standard)	ATIS-PP-0600328.2007
Lawfully Authorized Electronic Surveillance (LAES) for 3GPP IMS-based VoIP and other Multimedia Services	ATIS-0700005
Quality of Service Metrics for Linear Broadcast IPTV	ATIS-0800008
DC Power Systems - Telecommunications Environment	ATIS-PP-0600311.2007
Wireline Service Provider Job Aid for VoP and IAS LAES Standards	ATIS-PP-1000022
Local Service Migration Guidelines (LSMG) Issue 3	ATIS-0405300-0003
Unified Ordering Model Volume II – Analysis (LSOG 13)	ATIS-0412002-0005
Unified Ordering Model Volume III – Design: Issue 5 for Local Service Ordering Guidelines (LSOG) Version 13	ATIS-042003-0005
Synchronous Optical Network (SONET) - Payload Mappings	ATIS-0900105.02-2007
Fire Resistance Criteria - Ignitability for Equipment Assemblies, Ancillary Non-Metallic Apparatus	ATIS-PP-0600307.2007
Temperature, Humidity & Altitude Standards	ATIS-PP-0600010.2007
Data Buffering (Short Term Storage) in an Internet Access and Services LAES Environment	ATIS-1000021
Unified Ordering Model (UOM) Volume III - Design Issue 3 For Local Service Ordering Guidelines (LSOG) Version 11	ATIS-0410503-003
Unified Ordering Model Local Service Ordering (UOM-LSR) Volume II - Analysis Issue 3	ATIS-0412002-003
High Level OSS/BSS Functional Requirements and Reference Architecture for IPTV	ATIS-0300092
Codes for Identification of Service Providers for Information Exchange	ATIS-0300251.2007

Document Name	Document Number
Operations, Administration, Maintenance, and Provisioning (OAM&P) Models for Interfaces Across Jurisdictional Boundaries to Support Service Level Connection Management	ATIS-0300263.2007
Supplement to T1.211-2001(R2006), Information Interchange - Structure and Coded Representation of National Security and Emergency Preparedness (NS/ EP) Telecommunications Service Priority (TSP) Codes for the North American Telecommunications System	ATIS-0300211.a.2007
End-to-End Service Availability	ATIS-PP-0100016
ETS Packet Priority for IP NNI Interfaces - Requirements for a Separated Expedited Forwarding Mechanism	ATIS-PP-1000020
Mulitple Exchange Cerrier Access Billing (MECAB) Guidelines	ATIS-0401004-0009
Standard Outage Classification	ATIS-PP-0100012.2007
Wireline Service Provider Job Aid for VoP and IAS LAES Standards	ATIS-1000022
Categorization of Equipment Deployed within Communications Networks for Use in Outage Classification and Analysis Technical Report	ATIS-PP-0100015
Information and Communications Security for NGN Converged Services IP Networks and Infrastructure	ATIS-PP-0100014
Local Acquisition for Internet Access Networks in Support of Emergency Services	ATIS-0500012
Standard Outage Classification	ATIS-0100012.2007
Voltage Levels for DC-Powered Equipment Used in the Telecommunications Environment	ATIS-PP-0600315.2007
Serialization Standard for Telecommunications Network Infrastructure Equipment	ATIS-PP-0300091.2007
Serialization Standard for Telecommunications Network Infrastructure Equipment	ATIS-0300091.2007
900 NXX Code Assignment Guidelines	ATIS-0300060
Numbering for Internet-Based Relay Services Report	ATIS-0300093
Guidelines for the Administration of Telephone Numbers	ATIS-0300070
Location Routing Number Assignment Practices	ATIS-0300065
North American Numbering Plan Numbering Resource utiliation/Forecast Reporting (NRUF) Guidelines	ATIS-0300068
NPA Allocation Plan & Assignment Guidelines	ATIS-0300055
Personal Communications Services (PCS) 5YY NXX Code Assignment guidelines	ATIS-0300052
Fire Resistance Criteria – Ignitability Requirements for Equipment Assemblies, Ancillary Non-Metallic Apparatus, and Fire Spread Requirements for Wire and Cable	ATIS-0600307.2007
Information and Communications Security for NGN Converged Services IP Networks and Infrastructure	ATIS-PP-0100014
Information and Communications Security for NGN Converged Services IP Networks and Infrastructure	ATIS-PP-0100014

ATIS Board of Directors



CHAIRMAN OF THE BOARD **Christopher T. Rice** AT&T *Executive Vice President, Shared Services*



VICE CHAIRMAN **Nick Adamo** CISCO Systems *Senior Vice President, US Service Provider*



SECOND VICE CHAIRMAN **Mark Wegleitner** Verizon Senior Vice President, Technology



TREASURER Harald Braun Nokia Siemens Networks LLC Head of Convergence CBT North America ADC **Michael Day** Vice President of Strategy & Chief Technical Officer

ADTRAN, Inc. Kevin W. Schneider Chief Technology Officer

Alcatel-Lucent **Paul Mankiewich** *Chief Technology Officer, Americas*

AMDOCS Bill Guinn Chief Technology Officer

Bechtel Communications Jake MacLeod Principal Vice President & Chief Technology Officer

Bell Canada **Trevor Anderson** Senior Vice President, Technology

BT **Matt Bross** Group Chief Technology Officer

Calix Carl Russo President & CEO

Capgemini U.S. LLC Todd Shurtz Vice President, Telecom, Media & Entertainment

CenturyTel **Tim Walden** *Vice President, Engineering*

Ciena Joseph Berthold Vice President, Network Architecture Cincinnati Bell **Roger Rosenberger** Vice President, Customer Operations

Conexant Systems, Inc. Gopalakrishnan Ramamurthy Vice President, Systems Architecture

Corning Incorporated Marty Curran Senior Vice President & General Manager, Optical Fiber

D & E Communications, Inc. **G. William Ruhl** *Vice Chairman*

Deutsche Telekom Bruno Orth Vice President, Technology & Production Strategy, Networks

Embarq Corporation Loren Sprouse Vice President, National Network Services

Epic Touch Co. Trenton D. Boaldin President

Ericsson, Inc. Asok Chatterjee Vice President, Strategic Standardization, Public Affairs

Fujitsu Doug Saylor Senior Vice President Marketing & Services

GENBAND Charles Vogt Chief Executive Officer & President Global Crossing Limited Michael J. Shortley, III Vice President & General Counsel, North America

Harris Corporation Kent Buchanan Vice President, Corporate Technology & Development

Hewlett-Packard Lionel Lapras Vice President, Strategy

Hitachi **David Foote** *Chief Technology Officer*

Huawei Technologies (USA) **Yi Zhao** *Vice President*

Intel Anthony Neal-Graves General Manager, Modular Communications Platform

Intelsat Global Services Corp. **Open**

Intrado John Snapp Senior Technical Officer

JDSU **Bruce Hembree** Vice President, Global Solutions

Juniper Networks **Kim Perdikou** Executive Vice President, Infrastructure Products Group & General Manager, Service Provider Business

Kyocera Telecommunications Research Corp. (KTRC) **Terry Lingren** *Vice President, Engineering* LG Electronics Nandhu Nandhakumar Senior Vice President, Advanced Technology

Level 3 Communications Jack Waters Chief Technology Officer

LSI Corporation Claudine Simson Executive Vice President & Chief Technology Officer

Microsoft **Open**

Motorola, Inc. **Bill Weeks** Vice President & Chief Systems Architect

Movius Interactive Corp Arun Sobti Chairman

NEC Corporation America Allen Levine Vice President

NeuStar, Inc. **Tom McGarry** Vice President, Strategic Technical Initiatives

NOKIA, Inc. Leo Fitzsimon Vice President, Government & Industry Affairs

Nortel John Roese Chief Technology Officer

QUALCOMM Incorporated **Dr. Mark Epstein** Senior Vice President, Development Qwest **Pieter Poll** Chief Technology Officer

Research in Motion Ltd. Atul Asthana Vice President, Global Standards

Sony Electronics Inc. James Williamson Vice President, Technology Standards

Spirent Communications **Open**

Spirit Telecom **Terry Metze** Executive Vice President, Business Development & Strategy

Sprint Corporation Ali Tabassi Acting CTO & Senior Vice President, Technology Development

SureWest Communications **Bill DeMuth** Vice President, Chief Technology Officer

Symmetricom Tom Steipp Chief Executive Officer

Syniverse Technologies Jerry Easom Vice President, Industry Relations

Tekelec Frank Plastina President & CEO

Tektronix, Inc. **Rich McBee** *President* Telcordia Technologies **Adam Drobot** President, Advanced Technology Solutions & Chief Technology Officer

Telephone and Data Systems, Inc. Joseph R. Hanley Vice President, Technology Planning & Services

Tellabs **Open**

TELUS Ibrahim Gedeon Chief Technology Officer

T-Mobile USA James J. Healy Vice President, Industry Alliances

Trendium Steven Gordon President & CEO

Underwriters Laboratories, Inc. **Gary N. Savin** Vice President, General Manager, EMC Division

UTStarcom, Inc Gene Wuu Chief Technology Officer

VeriSign, Inc. Charles J. Meyers President, Messaging and Mobile Services

Verivue, Inc. Jim Dolce Chief Executive Officer Widevine Technologies Glenn Morten Executive Vice President, Engineering & Chief Technology Officer

Windstream Communications Frank A. Schueneman Senior Vice President

Wisor Mark Mendes Chief Executive Officer

ATIS Member List

1-800 American Free Trade Association 2wire 3PV - Third Party Verifications 800 Response Information Services Accenture Alaska Communications Systems ACM Actelis Networks ADC ADTRAN Advanced Technologies & Services, Inc. Aktino Alcatel-Lucent AMCC AMDOCS American Public Communication Council, Inc. Amherst Telephone Company Andrew Corporation **APCO International** ASSIA AT&T Aware **Bechtel** Communications, Inc. Bell Canada Ben Lomand Telephone Coop, Inc. Bexar Metro 9-1-1 **BigBand Networks Bingham McCutchen** LLP Bonneau & Associates **Bourns Limited** Broadcom ΒT Buckeye TeleSystem, Inc. California Cable & **Telecommunications** Assoc. Calix Capgemini

Cass Information Systems Centillium Communications, Inc. CenturvTel Ceterus Networks Charter Communications Chillicothe Telephone Co. Ciena Cincinnati Bell Telephone Cisco Systems Coastal Communications **Coastal Technologies** Group, Inc. Commonwealth Long Distance **Communications Data** Group Communications Test Design, Inc. Comporium Data Services CommSoft Compuware ComSouth **Telecommunications** Control Point Solutions Conexant Systems, Inc. Consolidated Communications Cooperative Communications Corning Incorporated Corrigent Systems Cortina Systems, Inc. **Cox Communications Creative Support** Solutions csf Corporation CSI **Telecommunications Dallas Semiconductor D&E** Communications Data Center Degree Controls

Denco Area 9-1-1 District Deutsche Telekom **Digital Fountain Dilithium Networks** DISA DSET Corp. Eastex Telephone Coop. ECI Telecom LTD Electronics and **Telecommunications Research Institute** (ETRI) EMBARQ Epic Touch Company Ericsson **ETI Connect** Evans Griffiths & Hart **Evertz Microsystems** Ltd Evolving Systems, Inc. FBI-ESTS FCI USA. Inc. Fred Williamson & Associates, Inc. **Frequency Electronics** Fultec Semiconductor Fujitsu Gallaudet University **GENBAND** Global Crossing Telecommunications, Inc Grand River Mutual Telephone Corporation Granite State Telephone Greater Harris County 911 Harris Corporation Hatteras Networks Hawaiian Telcom **HBF Group** Hewlett Packard Company **Hickory Tech Internet High Tech Computer** Corp.

Hitachi HLAA Horry Telephone Cooperative, Inc. Huawei Technologies Hypercube Independents Fiber Networks **Ikanos Communications** Infineon Technologies AG Inmarsat Limited Innovative Systems, LLC Intec Telecom Systems Integra Telecom Intel Interdigital Communications Corporation Intertek Ineoquest Intrado **Iowa Network Services IP** Fabrics **IP Unity** Irdeto **Ironton Telephone** IDSU John Staurulakis, Inc. **Juniper Networks Kineto Wireless Kyocera International** L. Robert Kimball & Associates Lakedale Communications Level 3 Communications LG Electronics MobileComm USA Littelfuse LSI Corporation Magnolia Broadband Martin Group Marvell Semiconductor Mavenir Systems **MetaSwitch** The Melcher Group

microDATA **Microsoft Corporation** Mid America Computer Corporation Mid-America Regional Council Moapa Valley **Telephone Company** Monroe Telephone Company Motorola Nagravision National Communications Systems National Information Solutions Coop. National Technical Systems (NTS) Navini Networks NextWave Wireless NDS NEC Corporation of America NECA NetNumber NeuStar Neutral Tandem NewStep Networks Nielsen Media Research NIST Noblis Nokia Nokia Siemens Networks LLC Nortel Networks North-Eastern Pennsylvania Telephone nSpired Design NTELOS NTIA/ITS NTT MCL **One Communications Openwave Systems** Oracle Oscilloquartz Pac-West Telecom Pen-Link, Ltd.

Pantech PECO II Pierce, Neumeister & Associates, Inc. **Pigeon Telephone** Company Pixelmetrix PMC-Sierra Polaris Wireless, Inc. Procera Networks, Inc. Profitline Public Safety Canada **Public Service Telephone Company** Pulse QUALCOMM Owest Real Communications, Inc. **Redsky Technologies** RIM **Rim Semiconductor Rochester Telephone** Company **Rogers Wireless** Rural Cellular Assocation Saft America, Inc. Sage Management Inc. SAIC Canada Samsung **Telecommunications** America Sandvine Inc Sandy Beaches Software SeaChange International Socket Telecom Solera Networks Soma Networks Sony Electronics Sorenson Communications Southwest Research Institute Sparnex NV/SA Spirent Communications

Spirit Telecom Sprint SS8 Networks Stanford Networking **Research Center** State Long Distance Telephone Company State of Vermont Enhanced 9-1-1 Board Sun Microsystems SureWest Communications Symmetricom Synchronoss Technologies, Inc. Syniverse Technologies **TANDBERG** Television Tarrant County 9-1-1 District TechnoCom Tekelec Tektronix Telchemy Inc. **Telcordia Technologies TeleCommunications** Systems **TeleGuam Holdings** Telephone and Data Systems **TeleSphere Software** Tellabs **Tele-Tech Services Telmar Network** Technology TELUS TenXc Wireless **TEOCO** Corporation **Texas Instruments** Texas Commission on State Emergency Communication Thomas & Betts Corporation Thomson T-Mobile Tollgrade Communications, Inc. **Trendchip Technologies** Trendium

Tridea Works, LLC TruePosition **TVN Entertainment** Corporation Tyco Electronics, Raychem UDP Underwriters Laboratories Union Telephone Company U.S. Metropolitan Telecom, LLC **UT Starcom** Varaha Systems Verimatrix, Inc. VeriSign Verivue, Inc. Verizon Vertek Corporation Virginia Information Technologies Agency, 911 Services Vonage Washington Emergency Management Washington PSAP West Carolina Rural Telephone Coop. Westell. Inc. Western New Mexico **Telephone Company** Widevine Technologies Windstream Communications Wisor Wood County Telephone Company WorldNet Telecommunications. Inc. XIT Rural Telephone Coop. **XO** Communications Ygomi Zarlink Semiconductor Zavo Bandwidth Tennessee, LLC

Transforming the Network... Transforming the **EXPERIENCE**

2007 ATIS Annual Report

1200 G Street, NW Suite 500 Washington, DC 20005 202-628-6380 www.atis.org



