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### ATIS NEWS

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## PRESIDENT'S MESSAGE

### Welcome to the *ATIS Update*.

ATIS solutions are advancing the information and communication technology (ICT) industry's transformation. In this issue of *ATIS Updates*, you will learn how ATIS is addressing the industry's top priorities and challenges. You also will see how our work is defining models to partner strategically with other industries, ensuring that ICT objectives are built into these innovative collaborations. Most recently, ATIS is:



- Progressing solutions to lessen the burden of illegal robocalling on consumers;
- Helping smart cities share data securely with other cities, federal and state government agencies, citizens and application developers;
- Harnessing emerging blockchain and distributed ledger technology for ICT industry business imperatives;
- Creating standards to more specifically target potentially life-saving Wireless Emergency Alerts to get them to at-risk populations;
- Mitigating GPS vulnerabilities and more.

Through the invaluable contributions of our committees, forums and work groups, ATIS continues to progress our member-driven agenda. The pace of progress is rapid. Keep up to date at [www.atis.org](http://www.atis.org).

Sincerely,



Susan M. Miller  
President & CEO

## FEATURED INITIATIVES

### INDUSTRY-DRIVEN ACTION TO MITIGATE ILLEGAL ROBOCALLING

#### *Advancing the SHAKEN protocol.*

ATIS is the body that is bringing the industry together to set robocalling mitigation protocols into action — work that is critical to restoring trust in the voice network. The Secure Telephone Identity Governance Authority (STI-GA) Board operates under the auspices of ATIS. In November, it issued a Request for Proposal (RFP) for the STI Policy Administrator (STI-PA), which will apply and enforce the rules as defined by the STI-GA to operationalize the SHAKEN (Signature-based Handling of Asserted information using toKENS) framework.

Multiple responses to the RFP from qualified vendors were received on schedule by February 4, 2019. On May 30, iconectiv was announced as the new STI-PA vendor. This selection completes another critical deliverable set by the FCC North American Numbering Council (NANC) Call Authentication Trust Anchor Working Group (CATA WG).

Developed by the ATIS/SIP Forum IP-NNI Task Force, SHAKEN specifies a practical mechanism for service providers to implement the IETF's STIR (Secure Telephone Identity Revisited) protocol to authenticate calls and let consumers know that the telephone number displayed on their caller ID is accurate. It also allows them to be alerted when that may not be the case. The STI-PA will specifically ensure that STI certificates are only available to authorized service providers, based on rules defined by the STI-GA. It will verify that a service provider meets the defined criteria for participation in the SHAKEN framework before issuing "Service Provider Code tokens" to the approved provider. It must also ensure that STI Certification Authorities perform all security functions specified to maintain the integrity of the SHAKEN framework.

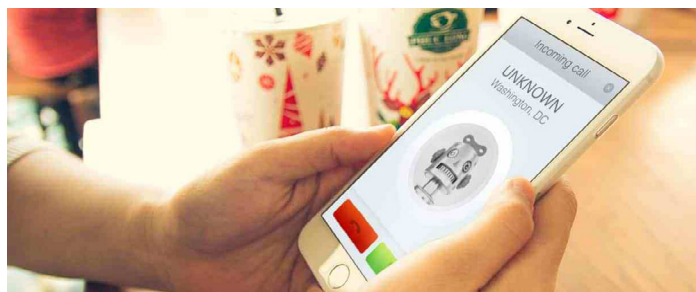
#### *Advancing robocalling mitigation internationally.*

ATIS is now working with the [Canadian Secure Token Governance Authority \(CSTGA\)](#) to, among other things, act as a liaison providing expertise and guidance in the RFP process to select the Canadian STI-PA and ensure interworking between the two countries. ATIS is also cooperating with the CSTGA to develop an IP-NNI TF specification that will extend the SHAKEN trust environment to include cross-border traffic between the U.S. and Canada as a first step toward a global SHAKEN deployment.

#### *Informing the public.*

This year, ATIS started holding a series of webinars to inform the industry, legislative and regulatory community and the general public on the work taking place. A Tuesday, May 14, webinar covered the SHAKEN Governance Model and how it is setting robocall mitigation protocols into action in the networks. Access an archived version of this presentation [here](#). The first webinar in the series took place January 30, with an overview of the protocol entitled [SHAKEN 101: Mitigating Illegal Robocalling and Caller ID Scams](#).

Keep up to date on the industry's robocalling mitigation work and news coverage on this topic at <https://www.atis.org/sti-ga/>.



### 5G

#### *Positioning ATIS members as leaders in the new network.*

Our 5G work advances and supports ATIS member goals and engagement in this rapidly developing

global technology. Most recently, a Technology and Operations Council (TOPS) Focus Group was launched to explore new requirements and use cases applicable to 3GPP post-Release 16 work (Release 17 and beyond). The output of this work will serve as valuable input into 3GPP as well as the ATIS Innovation Agenda initiatives related to network evolution. Learn more in the [TOPS Council section](#) of this newsletter.

The results of this work will be added to ATIS reports focused on the use cases needed to identify key high-level requirements for standardization. Three technical reports have been developed providing the North American perspective:

- [5G Reimagined: A North American Perspective \(Issue 2\)](#) concisely captures the North American vision and goals for 5G
- [Subscriptionless Devices and Services](#) investigates new architectural models for network services and applications
- [Optimizing User Experience in 5G](#) explores new service concepts and technical approaches to enhance services and operations
- ATIS is currently updating its report [Neutral Host Solutions for Multi-Operator Wireless Coverage in Managed Spaces](#) to address 5G implications.

Adding ATIS input to a major industry event, ATIS Principal Technologist Tom Anderson spoke on a panel at the Big 5G Event, which took place May 7, in Denver. The panel [Do AI and Analytics Improve Customer Experience in a 5G World?](#) included panelists from AT&T, ClickSoftware and Sandvine and was moderated by *Heavy Reading*.



## THE INNOVATION AGENDA

### *A framework for advancing industry transformation.*

The Innovation Agenda was created by ATIS' Board of Directors to address our industry's evolution, one that is bringing about a complete transformation – and a new industry state with fresh business models. At its core, the Innovation Agenda defines ATIS' overarching technology strategy, direction and prioritizes forward-looking initiatives in the next two to five-year timeframe as determined by their industry impact. Each priority is intended to focus on where the industry is best served to align and collaborate early. The initiatives coming out of our Innovation Agenda are some of the most exciting areas in which our industry is seeking new models to align, collaborate and partner strategically with other vertical industries.

### BLOCKCHAIN/DISTRIBUTED LEDGER

#### *Harnessing an emerging technology for ICT industry business objectives.*

While still in exploratory and developmental phases, Distributed Ledger or "Blockchain" Technology has the potential to impact the ICT industry by delivering new decentralized data management frameworks that can be applied to an innovative range of uses. ATIS' Distributed Ledger Technology (DLT) Initiative is examining DLT's role in enabling new business models and revenue streams governed through use of smart contracts. The objective of this work is to validate key aspects of distributed ledger technology as it applies to real-world challenges facing today's communications industry. Through the analysis of a specific use case, it will assess if the unique characteristics of DLT can be a game-changer by enabling innovative solutions to difficult problems.

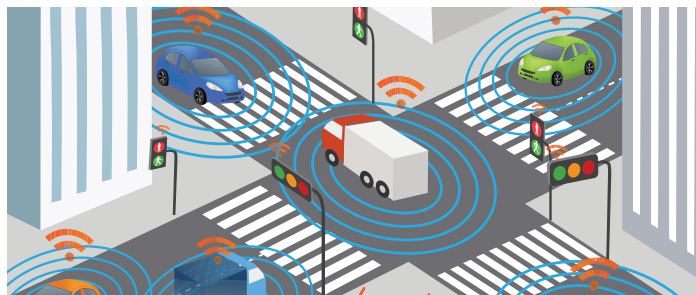
The basic idea behind the identified use case is to study how we can combine data about outgoing calls (origination, end customer, call purpose, etc.) leveraging a distributed ledger so that the terminating service provider (and their analytics/call-blocking service) can provide a better



mechanism to differentiate between good and bad calls. This is especially difficult – and valuable – in complex calling scenarios where, for example, a call center may be originating calls on behalf of an enterprise, using third-party calling platforms and multiple originating service providers for a short-term calling campaign such as a product recall.

This very realistic scenario isn't fully addressed by SHAKEN, the protocol ATIS and the IP-NNI Task Force developed to mitigate unwanted robocalling, but it can leverage capabilities that are provided by SHAKEN. Therefore, the analysis will build on the STIR/SHAKEN mechanism that provides verified information about the calling party number as well as the origin of the call — known as "attestation." It will combine SHAKEN with information about the call origination and use DLT to allow a range of players to access the information they need for their role while protecting the information from unauthorized access – something that is central to DLT. The final report is anticipated in 4Q2019.

[Learn more.](#)



## CONNECTED VEHICLE CYBERSECURITY

*Bringing ICT industry insight to reducing the threat of cybersecurity breaches in a new world of vehicles connected through the telecommunications network.*

ATIS' Connected Vehicle Cybersecurity work is applying ICT industry insights to reducing the threat of cybersecurity breaches in a new world of vehicles connected through the telecommunications network. So far, it has generated a roadmap for an industry-to-industry collaborative cybersecurity program. [Improving Vehicle Cybersecurity: ICT Industry Experience and Perspectives](#) has been hailed as a blueprint for

effective collaboration between the ICT industry and connected vehicle manufacturers.

Most recently, through ongoing outreach and discussions with key security vendors, this group developed the Security Framework including hardware, software, threat intelligence, network and cloud security elements. Development of the collaborative program proposal is in progress with an objective of engaging select OEM's beginning in Q3. [Learn more.](#)

## CONTEXT-AWARE IDENTITY MANAGEMENT

*Helping service providers leverage the vast wealth of context-aware information to make identifying users and devices (and granting them access to authorized services) easier and more secure.*

Technology advancements in IoT sensors and devices, edge computing and storage, as well as a growing number of connected devices create an abundance of contextual information that is available to networks. A new ATIS report overviews the latest in context aware identity management (CaldM) approaches that this information makes possible. ATIS' [Context-Aware Identity Management Framework](#) lays out the framework and functional elements that will drive CaldM innovations into the future.

Envision a world in which, instead of having to apply increasingly more complex passwords and authentication factors, a system leverages contextual information to increase security performance while transparently delivering a better user experience. "Context awareness" refers to a system's ability to gather information about its environment and adapt behavior accordingly. "Situational awareness" extends this concept to project contextual data onto process and tasks, and even predict future events. As the means for using context and situational information grow more sophisticated, robust new solutions are evolving that apply real-time and dynamic approaches to managing authentication and authorization by using contextual factors such as location, proximity and environmental data. Learn

more in the [Context-Aware Identity Management Framework](#) report, available in the ATIS White Paper Center.

## CYBERSECURITY RISK ASSESSMENT FOR IoT APPLICATIONS AND SERVICES

*Enabling security by design for IoT solutions.*

As the Internet of Things (IoT) accelerates, there is a growing need to protect all assets involved from attack and from maliciously being turned into a source of attack on other users. A new ATIS report provides the fundamentals needed to perform risk assessments for Internet of Things (IoT) applications and services. [An Architectural Risk Analysis for Internet of Things \(IoT\)](#) helps IoT designers, architects and planners understand the risks their product or service faces so that they can address these in a direct and quantifiable way. By using it, developers can ensure proper security is part of their solutions by design.

The report uses the ATIS Cybersecurity Architectural Risk Analysis (ARA) to establish a framework for assessing cybersecurity risk and applies the ARA to general IoT solutions involving network operators. A main benefit of an ARA risk assessment is that its results identify specific security mitigations that can address the most serious threats from a wide range of sources. As a result, it can suggest the best expenditure of time, money and resources to fortify an asset to mitigate the most serious risks given the specific IoT application and associated attributes. Access [An Architectural Risk Analysis for Internet of Things \(IoT\)](#) in the ATIS White Paper Center.

## SMART CITIES

*Creating a comprehensive Smart Cities Data Exchange Framework.*

In April, US Ignite and ATIS completed phase-one development of the Smart Cities Data Exchange framework, a project started in September 2018 to create a blueprint for the secure and interoperable exchange of data

beyond city operational boundaries. More than ten community partners and nearly a dozen companies have joined the project working group. The consortium has defined its area of focus and created an implementation plan based on the scenario of exchanging community and economic development data, with an emphasis on datasets that contribute to measures of mobility and livability across a region.



Traditional data like municipal budgets and crime reports, as well as new data from sensors, vehicles and IoT-enabled infrastructure have the power to improve decision-making processes related to housing, transit and commercial development at the local level. However, for cities to benefit from this information, they need new data-driven tools to visualize development outcomes and effectively assess neighborhood impact. Cities also need to be able to share data in an interoperable and secure way with other cities, adjacent communities, federal/state government agencies, trusted partners, citizens and application developers.

The Smart Cities Data Exchange framework details the processes for taking data from community development source systems (such as traffic sensor data and affordable housing stock); creating a pipeline for data transformation into a common open schema; merging data from across multiple communities; and also serving data through APIs, discovery systems and visualization tools. For more information, visit [Smart Cities Data Exchange](#).

*The consortium of industry partners in this initiative includes: AT&T, C Spire, Cisco, Fujitsu, Current by GE,*

iconectiv, Interdigital, Microsoft, Oracle, Qualcomm and Verizon

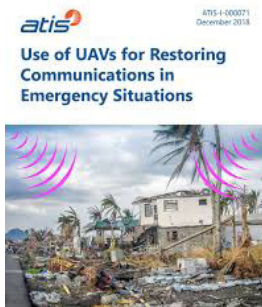
Community partners include: Austin, Texas; Chattanooga, Tenn.; Colorado Springs, Colo.; District of Columbia; Independence, Ore.; Kansas City, Mo.; Las Vegas, Nev.; Portland, Ore.; San Diego, Calif.; Virginia Beach, Va.; and Denver, Colo.

## UNMANNED AERIAL VEHICLES

*Delivering insight into the use of unmanned aerial vehicles in disaster recovery operations.*

When infrastructure is damaged by a significant disaster event, the restoration of communications is one of the most urgent and important tasks. Unmanned aerial vehicles (UAVs) have started being used for several important roles in the process of restoring communications infrastructure. One role for UAVs is to act as flying cell sites, which can provide mobile cellular coverage as an alternative to ground-based cell towers. An ATIS report [Use of UAVs for Restoring Communications in Emergency Situations](#) captures both the planning and operational aspects of using UAVs to help restore the services critical to so many post-disaster functions.

Experience shows that the effort that goes into advanced planning significantly improves the speed and quality of the recovery process. Considerations presented in this report can help to restore coverage more quickly — whether the outage is caused by non-functioning individual cell sites or wide-spread damage to infrastructure. [Access the report](#) in the ATIS White Paper Center.



## TECHNOLOGY AND OPERATIONS COUNCIL INITIATIVES

### IoT CATEGORIZATION

*A deeper understanding of the IoT from a network perspective.*

Growth in the IoT ecosystem, in terms of the number of connected devices globally and in total spending on end-point devices and services, is driving a range of new uses. This creates new network infrastructure requirements. ATIS is helping the ICT industry better understand these through our IoT Categorization (IoT Cat) initiative. Today, initial standards in this area define only three network slice types: massive machine type communications, supporting a massive number of Internet of Things (IoT) devices, which are only sporadically active and send small data payloads; enhanced mobile broadband, characterized by very high traffic, high data rate and high mobility; and ultra-reliable low-latency communications, characterized by low latency and ultra-high reliability. ATIS is defining other potential slices for standardization. The work also seeks to identify areas of commonality among slices that will guarantee the same service characteristics, keeping service quality consistent for a given IoT device used across different operators.

Thus far, this analysis has found that a majority of the IoT applications and devices examined generally map to the currently defined three slice types. However, a smaller subset of the applications and devices exhibit characteristics of multiple slices. Further analysis will identify the additional slice types that may be required. The IoT Cat group is liaising with other SDOs including IEEE, 3GPP, oneM2M, and GSMA. Based on feedback, work is underway to refine current slice mappings and characterization of potential new slice types. The final document will be published in July. [Learn more.](#)

### VIRTUAL NETWORK FUNCTIONS KEY PERFORMANCE INDICATORS

*Discovering the indicators needed for optimal cloud performance.*

In the quest to optimize the deployment of NFV cloud resources, the industry needs a common approach. A recent ATIS Technology and Operations (TOPS) Council initiative is defining the techniques and identifying Key Performance Indicators (KPIs) for deployment of Virtual Network Functions (VNFs) across a network operator cloud. The work addresses the following business problems:

- Improved understanding of the VNF KPIs is needed by operators to develop the right cloud strategies for optimal cloud configurations and VNF performance
- Key service/performance related KPIs must be identified along with underlying infrastructure-level KPIs to understand best/optimal cloud configurations for each application/VNF type
- Insights into VNF requirements from underlying cloud infrastructure for 5G services are needed to assist in the evolution towards Cloud Native VNFs

As an initial outcome, ATIS' work provides service providers a better understanding of various applications (VNFs) including voice, telephony and 5G services and how to best prepare their cloud/infrastructure to support guaranteed QoS/SLAs for service performance. A report is expected by 3Q2019.

### 3GPP RELEASE 17 & BEYOND

*Discovering how transformational societal/business impacts will drive requirements.*

A new 2019 TOPS Council initiative is helping to realize ATIS' vision of a standards roadmap for 3GPP post-Release 16 to identify key technologies and consider how the transformational societal/business impacts of these technologies will drive

requirements. With the industry push toward 5G progressing rapidly, 3GPP Release 16 is currently being defined, but consideration is needed for what follows Release 16. 5G innovation and other trends are emerging with a surprising number of futuristic technologies on the horizon over the next decade, the estimated date for widespread 5G deployment. [Learn more.](#)

## STANDARDS AND SOLUTIONS

Through collaboration, ATIS' technical and operations committees develop standards and solutions that deliver and enhance key communications services. From improving the Wireless Emergency Alerts System, addressing GPS vulnerabilities, to being the industry's "go-to" source for ordering and billing resources and more, [ATIS committees](#) deliver results for the industry in many forms.

### A NEW HOME FOR ACCESS TO ATIS STANDARDS AND SOLUTIONS

In its quest to ensure secure access to the resources that are advancing ICT industry transformation, ATIS recently retired its long-serving Document Center and migrated all content to the new [ATIS document store](#), operated on our behalf by TechStreet. It contains ATIS documents for purchase by non-members. ATIS committee/group members will continue to have complimentary access to the ATIS deliverables they need via ATIS Workspace (AWS -- <https://access.atis.org/kws>).

Members must be registered in AWS in order to obtain access to the complimentary copies. Additional information about AWS is available via [https://www.atis.org/01\\_aws/faq/](https://www.atis.org/01_aws/faq/). Once logged into AWS, publications may be accessed via a new "Publications" folder that resides within each committee/group.



## TELECOM GLOSSARY UPDATE

As another innovation to speed access to industry knowledge, the [ATIS Telecom Glossary](#), is being upgraded, thoroughly reviewed and given interactive capabilities. The new Glossary is now live and users will note its fresh look and feel and some of the terms and definitions will be updated in the coming weeks. Yet, its mission will remain the same: to provide an authoritative source of definitions for standards developers, engineers and all who are active in the telecommunications field. Upon reading a term and its definition, users will have the option to provide feedback via the Glossary and ATIS staff is always willing to accept feedback throughout the year.

## ARCHITECTURE AND SERVICES

### Emergency Services Communications

*Improving the detection of service-impacting events.* As the all-IP transformation of our telecommunications networks advances, the FCC has begun investigating the possible expansion of its Part 4 Outage Reporting rules to include broadband and performance metrics (e.g., throughput, latency and packet loss). This means service providers across all industry segments — including cable, wireline and wireless, in all stages of the PSTN transition — need to be able to identify when their networks may experience service-impacting events that impair or cause the total loss of 9-1-1 services. As service architectures to support 9-1-1 calling and data delivery evolve to NG9-1-1, there is a need to better understand the complexities of how NG9-1-1 service architectures are designed and where there are divergences from the pre-existing legacy E9-1-1 network infrastructures. A new ATIS Technical Report, *Comparison of Enhanced 9-1-1 (E9-1-1) and Next Generation 9-1-1 (NG9-1-1) Focused on Reportable Outage Data Points* (ATIS-0500034.v002), compares the services architectures used today to provide E9-1-1 with NG9-1-1 service architectures to identify where in the architectures service-impacting events can be detected.

## Wireless Emergency Alerts

*Advanced targeting of life-saving alerts.* ATIS' work has set the Wireless Emergency Alert (WEA) system into action and is advancing its effectiveness. Most recently, a new group of ATIS standards has created WEA 3.0, which helps the system deliver potentially life-saving messages in a more precise geographic range and more precisely target at-risk populations while minimizing disruption to others. The new standards are for use by commercial mobile service providers, infrastructure vendors, OS providers, device OEMs and chipset manufacturers in developing the WEA 3.0 system. They address:

- **Geofencing.** While three of the new WEA 3.0 deliverables are updates to existing WEA 2.0 (eWEA) standards, the geofencing standard, *WEA 3.0: Device-Based Geo-Fencing* (ATIS-0700041), is a completely new specification. It provides methods for delivering the alert-originator-provided circle or polygon targeted area to the mobile device along with the WEA 3.0 message text. Backwards compatibility to the existing deployed base of pre-WEA 3.0 capable devices is addressed, as existing devices must continue to display the WEA message.
- **Device Behavior.** *Wireless Emergency Alert (WEA) 3.0 Mobile Device Behavior (MDB) Specification* (ATIS-0700036.v002). Among other things, this update defines a set of requirements for the behavior of the mobile devices whenever a WEA 3.0 alert message is received. While continuing to specify the audio signals, vibration cadence and visual keys, it supports the display of 360 characters and addresses the requirement for the user to have the ability to access the alert message for 24 hours. These requirements address GSM, UMTS, LTE and 5G-based mobile devices.
- **Defining Critical Interfaces.** *Wireless Emergency Alert (WEA) 3.0 Federal Alert Gateway to CMSP Gateway Interface Specification* (ATIS-0700037.v002) has been updated to support

device-based geo-fencing requirements and continues to define the interface between the Federal Alert Gateway and the Commercial Mobile Service Provider Gateway for WEA alerts.

- **Public Warning System Specification.** The *Wireless Emergency Alert (WEA) 3.0 via EPS Public Warning System Specification* (ATIS-0700010.v003) standard describes the use of the Evolved Packet System (EPS) Public Warning System for the delivery of WEA 3.0 messages. It includes the mapping of WEA 3.0 application level messages to the Cell Broadcast Center message structure as used within the EPS.

These standards and updates were developed to meet the requirement that WEA alert messages be delivered with more geographic precision, as set forth in the FCC Second Report and Order (R&O) and Second Order on Reconsideration. As with the other deadline-driven WEA standards ATIS has developed, ATIS members have introduced these requirements into the 3GPP process for global adoption. Access all ATIS [WEA 3.0 standards](#) in the ATIS document store.

## NETWORK-ENABLING SERVICES

### Numbering

*Streamlining valued industry resources.* ATIS' Industry Numbering Committee (INC) is recognized as an open industry forum for addressing and developing solutions for numbering issues. In January 2019, INC completed a major activity to combine the Central Office Code (NXX) Assignment Guidelines (COCAG) and the Thousands-Block Number (NXX-X) Pooling Administration Guidelines (TBPA). This combination will help to achieve administrative efficiencies by streamlining the Guidelines for obtaining numbering resources, thus making them more user friendly. The INC created the Central Office Code (NXX) Assignment Guidelines in the 1990s during the transition of central office administration to the NANPA under FCC contract, and then created the Thousands-Block (NXX-X) Administration Guidelines also in the

1990s, when the FCC mandated thousands-block pooling.

The INC has continued to maintain the two sets of Guidelines to address the processes for the separate NANP resources due to the different assignment procedures, different timelines and different Number Administrators contracted by the FCC. Although there are separate processes for central office codes versus thousands-blocks, there are many similarities in administration and there are also processes that involve both codes and blocks. The combined Guidelines, entitled *Thousands-Block (NPA-NXX-X) & Central Office Code (NPA-NXX) Administration Guidelines* (ATIS-0300119) will be published after the approval of the associated FCC Change Orders.

### Ordering and Billing

*Digital Services Ordering Guide.* ATIS' Ordering and Billing Forum (OBF) is developing a new resource to address the growing business need to define the requirements to establish digital services and the interfaces that need to be established for a related customer-facing API. The forthcoming Digital Services Ordering Guideline (DSOG) will define the telecommunications requirements to be incorporated in the implementation of an API for the use of ordering, authentication, policy and processing between providers (e.g., PUC Billing/Dispute records, SOX and other mandatory Communications Industry field requirements, etc.). It will establish the resource definition requirements to ensure those detailed records are available to meet policy and compliance needs. The DSOG is intended to serve as the baseline industry specification for Digital Platform Services and be a placeholder for ongoing analysis and decisions determined by Next Generation Networks providers and the relevant ATIS Committees responsible for further developing this uniform industry specification.

*Access Service Request (ASR) Guidelines.* In March, ATIS published the [Access Service Request](#)

[\(ASR\) Guidelines Version 59 \(ATIS ATIS-0404000-0059 - ATIS-0404028-0059\)](#). This Access Service Ordering Guidelines (ASOG) describes the various ordering forms used for the purpose of requesting access service to be provided by providers. These guidelines are used for access ordering by customers when placing an order for access service under the various provider's access service tariffs. Release of ASOG Version 59 is anticipated for implementation in September 2019.



### CBRS Commercialization

[Advancing use of the citizens broadband radio service](#). In December 2018, ATIS and the CBRS Alliance signed an agreement to cooperate closely to advance use of the 3.5 GHz Citizens Broadband Radio Service (CBRS) spectrum band. Under the agreement, the organizations will work together to address technical challenges and business opportunities for OnGo™ technology (an LTE-based technology – specified by the CBRS Alliance). This collaborative partnership will focus on network identity management initiatives and legal and regulatory compliance to support OnGo™ technology. Collaboration will focus on the technical interworking between the CBRS Alliance and ATIS solutions, including the International Mobile Subscriber Identity (IMSI), Home Network Identity (HNI), Priority Services, and Radio Access Networks. The work also addresses legal and regulatory compliance topics. [Learn more](#) about this work.

An archived version of an educational webinar offers an overview of shared HNI on CBRS and its benefits for the overall industry: <https://www.cbrsalliance.org/resource/cbrs-shared-hni-webinar/>

## OPERATIONAL EXCELLENCE

### Advancing ICT Industry Emergency Preparedness and Response

[Advancing members' emergency preparedness capabilities](#). ATIS contributions are key to helping ensure the network performs reliably during natural disasters and other emergencies. In March, the Network Reliability Steering Committee (NRSC) published the [Emergency Preparedness and Response Checklist \(ATIS-0100019\)](#). A valued information and communications technology industry resource, this document provides general guidance regarding preparedness for and response to a wide array of emergency situations including hurricanes, earthquakes and other events that cause major disruptions to operations, service and supplies. The Checklist (EPRC.xls) provides industry Best Practices offering guidance from assembled industry expertise and experience vital to maintaining the reliability of the nation's public communications networks and services. This resource is publicly available on the [NRSC webpage](#).

### Electrical Protection

[Protecting Ethernet Radio Systems](#). A new ATIS standard, [Electrical Protection for Ethernet Radio Systems \(ATIS-0600012.06\)](#), helps service providers in choosing appropriate protection and grounding methods for Ethernet Radio Systems. The standard describes electrical protection standards that may impact Ethernet radio systems for outside plant which utilize power over ethernet (PoE) to power externally mounted radios and antennas along with the services provided over these links. This document describes recommended best practices for grounding and bonding ethernet radio antennas and cables mounted on towers and residential and small business structures. It applies to the electrical protection for all Ethernet radio equipment installations.

## Mitigating GPS Vulnerabilities

[Expert recommendations addressing a critical concern](#). In December, ATIS recommended the Federal Government should address GPS/GNSS (Global Positioning System/Global Navigation Satellite Systems) vulnerabilities and mitigate their impact. Despite its long-standing dependability in delivering accurate time, GPS and GNSS are vulnerable to jamming, spoofing and system problems. A communique from ATIS' SYNC Committee requests government action to address these and contains specific recommendations. The goal is to maintain the reliability of the timing systems that are a critical part of our communications networks.

The recommendations represent the views of government, industry and GPS/GNSS users. Setting them into action will speed development of solutions to mitigate the risks to the systems that are the critical backbone for precision timing for so many industries. They encompass establishing an Assured Positioning, Navigation and Timing Program for U.S. civilian infrastructure; monitoring for GPS/GNSS disruptions, interference, and impacts; and taking enforcement action against spectrum violations. Access the full recommendations [here](#).

## Mitigating Illegal Robocalling

[Refining the SHAKEN specification](#). In its quest to improve the effectiveness of one of the industry's primary means for combatting illegal robocalling and caller ID spoofing, ATIS has recently issued three new errata to the Signature-based Handling of Asserted information using toKENs (SHAKEN) specification as well as one new specification. The goal is to facilitate the effective deployment of SHAKEN in the network:

Three new specifications refine SHAKEN to more closely align with core IETF STIR specifications

- [ATIS-1000074-E, Errata to Signature-based Handling of Asserted information using toKENs \(SHAKEN\)](#)
- [ATIS-1000080-E, Errata to Signature-based](#)

*Handling of Asserted information using toKENs (SHAKEN): SHAKEN Governance Model and Certificate Management*

- [ATIS-1000084-E, Errata to Technical Report on Operational and Management Considerations for SHAKEN STI Certification Authorities and Policy Administrators](#)

A new specification ATIS-1000085, *Signature-based Handling of Asserted information using toKENs (SHAKEN): SHAKEN Support of "div" PASSporT*, provides guidance for using SHAKEN in various call forwarding (i.e., "diversion") use cases. Learn more about the industry work to combat unwanted robocalling and Caller ID spoofing at the [Secure Telephone Identity Governance Authority site](#).

## ATIS Committees

- AIDC - Automatic Identification & Data Capture Committee
- ESIF - Emergency Services Interconnection Forum
- INC - Industry Numbering Committee
- IOC - International Mobile Subscriber Identity Oversight Council
- NGIIF - Next Generation Interconnection Interoperability Forum
- NRSC - Network Reliability Steering Committee
- OBF - Ordering and Billing Forum
- PTSC - Packet Technologies and Systems Committee
- SNAC - SMS/800 Number Administration Committee
- STEP - Sustainability in Telecom: Energy and Protection Committee
- SYNC - Synchronization Committee
- TMOC - Telecom Management and Operations Committee
- WTSC - Wireless Technologies and Systems Committee



## ATIS NEWS

### ATIS SELECTED FOR MEMBERSHIP ON THE FCC TECHNOLOGICAL ADVISORY COUNCIL

ATIS has been selected to serve on the FCC Technological Advisory Council (TAC) and ATIS Vice President - Technology and Solutions Mike Nawrocki has been chosen as the ATIS TAC representative. The TAC is composed of a diverse array of leading experts that helps the FCC identify important areas of innovation and develop informed technology policies supporting America's competitiveness and job creation in the global economy. Nawrocki joins seven new TAC members, including those from Juniper, Oracle and CTIA.

### ATIS COLLABORATES TO DELIVER FUTURE NETWORKING SURVEY REPORT

ATIS, *Light Reading* and *Heavy Reading* are excited to present the results of a jointly executed study to explore the key factors that will empower the future network-enabled communications and cloud markets. Our survey examined the critical factors, both technological and market-related (new business models and market structures), driving the industry into the next decade. Access the [Future Networking Survey Report](#). The report was sponsored by InterDigital, Nokia and Oracle.



### JOIN ATIS' BROAD MEMBERSHIP

Participation in ATIS Committees is always welcome. If you or anyone you know would be interested in getting involved with the innovative work covered in ATIS Updates, please contact Rich Moran, Director of Membership at [rmoran@atis.org](mailto:rmoran@atis.org). Beyond service providers and vendors in the ICT industry, ATIS welcomes academic institutions, researchers, regulatory agencies (state and federal) and others to engage in our work to advance industry transformation.

## ATIS EVENTS

# AMOC

### ATIS ANNUAL MEETING OF THE COMMITTEES

ATIS' Annual Meeting of the Committees (AMOC) was held April 29 - May 2 in San Diego, CA, with almost 200 representatives from ATIS member companies attending. The event was home to 35 meetings held over four days representing 13 of ATIS committees/Task Forces (DLT, ESIF, IMS911, IMSESINET, INC, IP-NNI Task Force, NGIIF, NRSC, OBF, PTSC, 3GPP Release 17 & Beyond, STEP and WTSC); 10 subcommittees; and five joint committees.

## INDUSTRY EVENTS



### MUST SEE SESSION:

INTERFERENCE IN TELECOMMUNICATIONS COPPER CABLE FACILITIES FROM SOLAR FARM INVERTER HARMONICS WEDNESDAY, SEPTEMBER 25, 2019 8:00 - 9:00 AM

SPEAKER: DAN ASHTON, ATIS PEG CONFERENCE CHAIR AND SENIOR ENGINEER INDUCTIVE COORDINATION AND ELECTRICAL PROTECTION, CENTURYLINK. ATIS IS AN ISE EXPO INDUSTRY PARTNER.

