



**Meeting of the
North American
Numbering Council
(NANC)**

February 09, 2022

Call to Order
and
Welcome

Opening Remarks

Jessica Rosenworcel

Chairwoman, Federal Communications Commission

Acknowledge

Nathan Simington

Commissioner, Federal Communications Commission

Roll Call,
Announcements
and
Recent News

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STI-GA NANC UPDATE

Brent Struthers
Director, STI-GA

Website: <https://sti-ga.atis.org/>

February 9, 2022

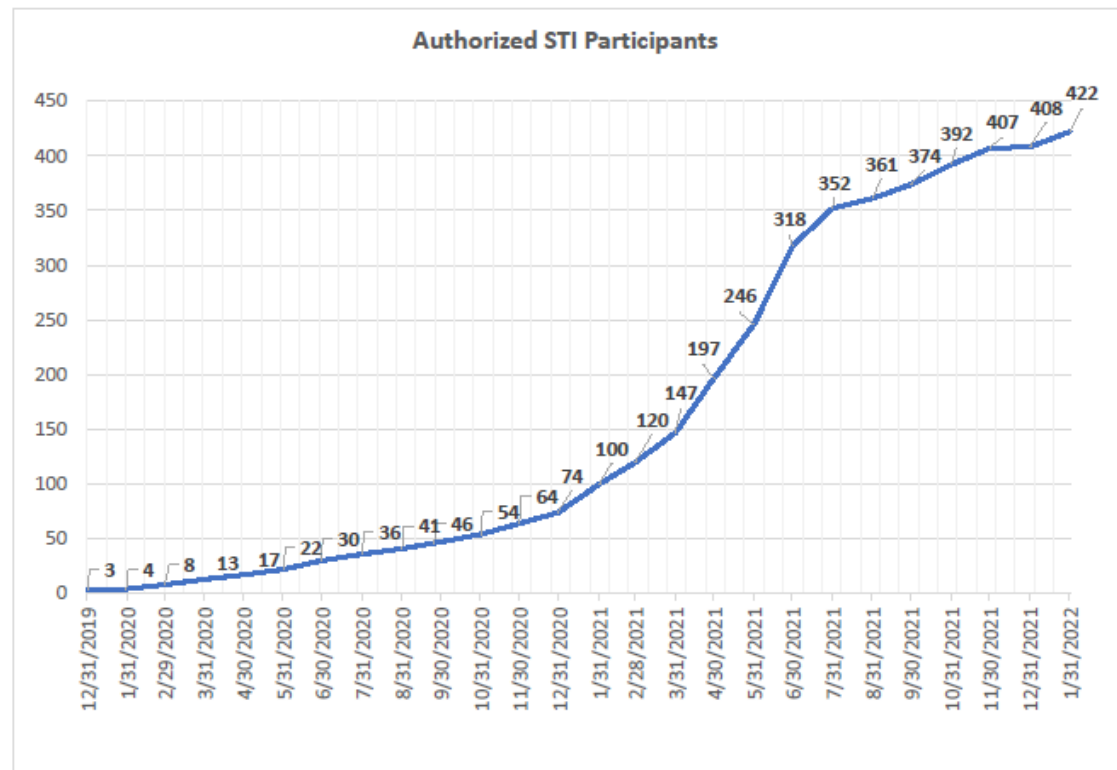


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SHAKEN Framework STI-PA Authorization

STI-PA Authorization

- 422 service providers authorized as of 1/31/22
- Currently 10 authorized STI-CAs with three more applications pending.



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SHAKEN Framework Status

2021 STI-GA SHAKEN Report

- A year of tremendous growth
- STI-GA Board continued to modify policies to address SHAKEN as needed:
 - Optional Use of Delegate Certificates
 - SPC token Access for Resp Orgs
- Access here: <https://sti-ga.atis.org/wp-content/uploads/sites/14/2022/01/2021-STIGA-SHAKEN-Report-Public-Final.pdf>

Service Changes

- iconectiv recently implemented multi-region disaster recovery process.
 - Mitigates issues caused by recent Amazon Web Services outages.
- STI-PA Service Provider Contact List
 - For resolution of STI certificate issues

STI-GA Framework Funding

- Numbers are coming in for 2022, but we expect to be fully funded for the year.
- New contribution factor
 - 2021 factor: .0001821
 - 2022 factor: .000053
 - 2022 factor 71% lower than 2021 factor
 - A greater number of participating providers have allowed costs to be spread more broadly and lowered individual costs.

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2022 STI-GA Board Focus

- **SHAKEN Framework Funding**

- Ensuring the proper management of industry funds to support the SHAKEN framework while keeping the framework up-to-date with industry needs.

- **Cross-Border Call Signing**

- Preparing meetings with the Canadian Governance Authority to discuss any unique issues created by cross-border call signing and whether agreements between the Governance Authorities need to be worked out.

Questions?

North American
Portability Management
(NAPM) LLC
Report to the NANC

Teresa Patton, Co-Chair, NAPM LLC

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Statements of Work & Contract Amendments

- No new statements of work have been received during this reporting period.
- NPAC Release Schedule - Release 5.1 will be implemented on February 6, 2022 and includes functionality for CO 554 (SOW 27), as well as operational and usability enhancements.

2021 LNPA Accomplishments

- Exceeded the contractual requirement of 99.99% Service Availability
- Successfully deployed NPAC Release 5.0.2 which included numerous customer improvements
- Completed all Audit and Compliance exercises on time with zero deficiencies
- Successfully supported a 35% increase in demand for porting transactions
- Successfully supported a 30% increase in pool block requests
- Implemented 6 new NANC Change Orders and updated 22 Industry Specification Documents

Officer Elections

- Officer elections were held during the NAPM LLC's annual meeting in November. Deb Tucker with Verizon was elected as co-chair and Randee Ryan with Comcast was elected as secretary.

NAPM LLC Committees

Contract Implementation Committee (CIC)

- Three new finding reports for Providers of Telecommunications Related Services (PTRS Users that are non-Service Providers) to validate the need for NPAC data access were received and approved since the last NANC meeting.
- The Annual Certification Qualification (ACQ) process for Service Providers and PTRS Users for 2022 has kicked off. iconectiv will now allow on-line certification through their customer portal.

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Security Advisory Committee (SAC)

- iconectiv, via a secure Teams meeting, completed virtual tours of both data centers with members of the SAC and the FCC
- iconectiv led a “Cybersecurity Review” with members of the SAC and the FCC

Numbering Trends Advisory Committee (NTAC)

- The NTAC, a new advisory committee, was recently created and is tasked with identifying, researching and discussing trends and new industry developments and/or technology that may affect numbers, number management, and by association and extension may affect porting of numbers and/or porting experiences of end users of numbers.

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Appendix

NAPM LLC Role

- Provide oversight and management of the Local Number Portability Administrator (LNPA) in accordance with the contract, orders and/or direction from the FCC.

Contact Information

- Co-Chair – Deb Tucker, – 615-478-3548 or Deborah.Tucker@verizonwireless.com
- Co-Chair – Teresa Patton, AT&T – 972-989-5126 or TP1393@att.com
- Website - <http://www.napmlc.org>

Meeting Information

- The NAPM LLC meets monthly and a portion of each meeting is open for attendance by any interested party. The current meeting schedule is published on the NAPM LLC website.

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North American Numbering Council (NANC)

Numbering Administration Oversight Working Group (NAOWG)

Co-Chairs:

Philip Linse, Lumen

Robert McCausland, Intrado Communications

FCC Liaisons:

William Andrle and Rebecca Macaroni

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Area of Responsibility

- **Mission:** The Numbering Administration Oversight Working Group oversees the activities and reviews the performances of the North American Numbering Plan Administrator (NANPA), and the Billing and Collection Agent. It also provides oversight of number portability administration and the Reassigned Numbers Database Administrator.
- FCC contract oversight of the following vendors
 - North American Numbering Plan Administrator (NANPA) – Somos
 - NANPA – Administers the allocation of the North American Numbering Plan (NANP) numbering resources, the allocation of 1,000's Block Number Pooling, and the Routing Number Administration (RNA) for p-ANI numbering resources
 - Reassigned Numbers Database Administrator (RNDA) – Somos
 - RNDA – Administers the data that is provided into the RND and the service that is provided to callers.
 - Billing & Collections (B&C) Agent – Welch LLP
 - Bills and Collects from the Telecommunications industry for payment for the functions of the B&C Agent, NANPA, PA, and RNDA Vendors
- Oversight of Number Portability

Contract Status

NANPA/RNDA:

- SomosGov, Inc. – Awarded combined NANPA/RNDA contract
 - Effective December 1, 2020
 - Five-year base duration, plus three one-year options (total up to eight years); current expiration November 30, 2025

B&C Agent:

- Welch LLP – Billing & Collections contract
 - Effective May 1, 2018
 - Five-year duration; current expiration April 30, 2023

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Contract Oversight Activity

Activities:

- Monthly Review of Deliverables NANPA
 - NANPA monthly report
 - NANPA evaluation
 - NANPA combined system development status
 - 988 Implementation (10-Digit Dialing) status
 - Development of NANPA/PA/RNA/RNDA Survey

- Monthly review of RNDA
 - Monthly report
 - Evaluation

- Monthly Review of Deliverables B&C Agent
 - NANP financial monthly report
 - RND financial monthly report
 - Evaluation

- LNP Oversight
 - Number Portability Industry Forum (NPIF)

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NANPA

- Reviewed NANPA monthly reports
 - NANP
 - PA
 - RNA
- Completed NANPA monthly/quarterly evaluation
- NANPA contract includes combining Number Administration System (NAS), Pooling Administration System (PAS), and Routing Number Administration System (RNAS)
 - NANPA anticipates completion of combined NAS 1Q of 2023
- Development of NANPA/PA/RNA/RNDA Survey
 - Provides annual opportunity for user feedback
 - Targeted user types (Service Provider and Others/Regulator)
 - Considered in annual evaluation
 - Pending FCC Legal Review

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NANPA

988 Implementation Planning

- Upon the initial 988 implementation and the associated transition to 10-digit dialing and NANPA planning meeting pursuant to FCC 20-100 *Implementation of the National Suicide Hotline Improvement Act of 2018*, the NANPA monthly report includes a status of the transition to 10-digit dialing for 82 area codes across the United States.
- Planning meetings held on October 14, November 18, December 16, and January 13 to provide update to milestones for the transition from 7 to 10-digit dialing in NPAs where 988 is also an NXX
 - Mandatory 10-Digit Dialing effective date October 24, 2021 – July 16, 2022
- Additional information can be found at [https://www.nationalnanpa.com/transition to 10 digit dialing for 988/index.html](https://www.nationalnanpa.com/transition%20to%2010%20digit%20dialing%20for%20988/index.html)
- This status reporting will conclude upon nationwide 988 implementation by July 16, 2022.

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RNDA

- Review RNDA monthly report
- Completed RNDA monthly/quarterly evaluation
- Service provider data upload by 15th of each month
 - 171,798,286 total NANP numbers including Toll Free
- Small service provider data upload by 15th of each month began October 15, 2021
- RND websites
 - RNDA website: <https://www.reassigned.us/>
 - FCC page: <https://www.fcc.gov/reassigned-numbers-database>

Billing & Collections

–Reviewed B&C Agent Reports

- Annual Operational Review
- Monthly Review of Deliverables
- NANPA Financials
- RND Financials
- Completed Monthly/ Quarterly Evaluation

Number Portability Industry Forum (NPIF)

- The NPIF continues to meet on a monthly basis with a focus on XML Interface improvements, LSMS capacity planning and best practice review and updates.

- Remaining regularly scheduled meetings for 2021
 - February 8
 - March 8
 - April 5

- Tri-chairs:
 - Deb Tucker – Verizon (deborah.tucker@verizonwireless.com)
 - Teresa Patton – AT&T (tp1393@att.com)
 - Randee Ryan – Comcast (randee_ryan@comcast.com)

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**Numbering Administration Oversight Working
Group (NAOWG) Members**

NAOWG Members:

- ✓ 10x People
- ✓ Ad Hoc
- ✓ AT&T
- ✓ Charter
- ✓ Comcast
- ✓ Cox
- ✓ Inteliquent
- ✓ Intrado Communications
- ✓ Lumen
- ✓ Maine PUC
- ✓ NASUCA
- ✓ PACE
- ✓ TDS
- ✓ Telnyx
- ✓ T-Mobile
- ✓ US Connect
- ✓ Verizon
- ✓ Washington UTC

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Future Meetings/Contact Information

2022 Meetings

Feb. 24

Jun. 23

Oct. 27

Mar. 31

Jul. 28

Nov. 17

Apr. 28

Aug. 26

Dec. 15

May 19

Sep. 29

Contact the Co-Chairs for complete meeting or conference call details

Philip Linse – philip.linse@lumen.com, or

Robert McCausland – rwmccausland@intrado.com

NANC Call Authentication Trust Anchor (CATA) Working Group (WG)

Co-Chairs:

Beth Choroser, Comcast

Jackie Wohlgemuth, ATIS

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CATA WG CHARGE

Report no later than February 15, 2022 “a set of best practices relating to how terminating voice service providers can best protect their subscribers using caller ID authentication information.” The report was to address the following:

1. Identify and explain how STIR/SHAKEN caller ID authentication information is being or has been used by voice service providers and others to combat illegal robocalls.
2. Recommend a set of best practices for terminating voice service providers to reference regarding both the use of STIR/SHAKEN caller ID authentication information to protect subscribers and protecting subscribers who fall outside of the STIR/SHAKEN framework; including but not limited to the following:
 - Means by which terminating voice service providers can use the STIR/SHAKEN caller ID authentication information included in calls they receive to best protect their subscribers, including elaborating on how that information can improve call analytics and blocking strategies.
 - Techniques that do not rely on STIR/SHAKEN caller ID authentication information that terminating voice service providers could employ to protect consumers.
 - Whether, and if so, how, STIR/SHAKEN caller ID authentication information—including but not necessarily limited to verification results—should be shared with call recipients.
 - If STIR/SHAKEN caller ID authentication information should be shared with call recipients, recommend whether this practice should be standardized.

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Background for Best Practices

- Focus is on actions that can be taken by terminating voice service providers (VSPs) to protect their customer
- Recognizes that terminating VSPs leveraging multiple techniques to detect and stop illegal robocalls are best able to protect consumers and improve customer experience
- Recognizes the importance of STIR/SHAKEN for restoring trust in the network and the need for more ubiquitous implementation (e.g., possibility of filtering for calls lacking an “A” attestation)
- SHAKEN verification can provide inputs for analytics (e.g., absence or presence of signature or other information elements of the signature)
- Recognizes non-STIR/SHAKEN techniques for combatting illegal robocalls
- Recognizes impact of Emergency Telecommunications Service, including STIR/SHAKEN framework for signing 911 calls

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Best Practices for Terminating Service Providers to Protect Subscribers

Near-Term Best Practices

1. Display to the subscriber a STIR/SHAKEN verification indicator for calls with an attestation level of "A."
2. Employ or make available to the subscriber, complementary analytics to identify calls that are highly likely to be illegal or unwanted.
3. Display call labels to subscribers and/or employ diversion techniques that enable redirection of calls to alternate destinations such as voice mail.
4. Offer to subscribers call treatment options such as block lists, anonymous call rejection, or do not disturb.
5. Block calls that are highly likely to be illegal before they reach subscriber premises equipment (e.g., calls from invalid codes, calls from unallocated or unassigned numbers, and calls on a do-not-originate list).

Best Practices for Terminating Service Providers to Protect Subscribers

Longer-Term Potential Best Practices

1. Use analytics algorithms to identify patterns of information found in SHAKEN PASSporTs (e.g., attestation and origination identifier assignments) that may provide better accuracy for reputational scores. Note that “reputation scores” can apply at the individual user level (i.e., as determined by the calling party number and origination identifier), as well as at the service provider level (i.e., associated with all calls from a service provider using a given STI certificate).
2. For calls with a signed Resource Priority Header (RPH) PASSporT, use the RPH field for Call Validation Treatment when terminating calls to a PSAP, or terminating callbacks from PSAPs.

CONSIDERATIONS FOR FURTHER STUDY

ENTERPRISES

- Enterprise customers may benefit from more information than a simple SHAKEN verification result (e.g., “verstat=TN-Validation-Passed”, “verstat=TN-Validation-Failed”, or “verstat=No-TN-Validation”)
- Enterprises may want to perform their own analytics to verify calling party identity
- The universe of enterprises is diverse, complicating recommendations that go beyond sharing the SHAKEN verification result
- Before developing terminating service provider best practices for calls destined to enterprises, additional study is needed:
 - whether to transmit entire SIP Identity headers or other information such as RCD
 - current technical capabilities of enterprises
 - potential security issues
 - Sufficiency of commercial agreements between enterprises and service providers
- Recommendation for FCC to consider a referral to the CATA WG for further study

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LOGISTICS

- Meetings pertaining to this second report were held:
 - September 14, 21, 28
 - October 5, 12, 19, 26
 - November 2, 16, 30
 - December 7, 14
 - January 4

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MEMBERSHIP

- ACA Connects
- AT&T
- ATIS
- Bandwidth
- Charter Communications, Inc
- Comcast
- Cox Communications
- Google
- iconectiv
- INCOMPAS
- Intrado Communications, LLC
- Lumen
- Montana PSC
- Neustar
- NTCA
- Peerless Network, Inc.
- SIP Forum
- Somos
- T-Mobile USA
- Telnyx LLC
- Transaction Network Services (former)
- TransNexus, Inc.
- US Connect
- USTelecom

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CLOSING

Q&A

Co-Chairs	FCC Liaisons
Jackie Wohlgemuth, ATIS jwohlgemuth@atis.org	Michael Nemcik Michael.Nemcik@fcc.gov
Beth Choroser, Comcast Beth_Choroser@Comcast.com	Alexander Hobbs Alexander.Hobbs@fcc.gov

Council Vote on the
Call Authentication Trust Anchor
Working Group
Report and Recommendation

Public Comments and Participation

Wrap Up

Adjourn