



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

June 14, 2022

**Call to Order
and
Welcome**

Opening Remarks

Trent Harkrader

**Chief, Wireline Competition Bureau,
Federal Communications Commission**

**Roll Call,
Announcements
and
Recent News**

NANC Meeting
June 14, 2022

**North American Numbering
Council (NANC)**

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

June 14, 2022

Co-Chairs:

Philip Linse, Lumen

Robert McCausland, SGE

FCC Liaisons:

William Andrle and Rebecca Maccaroni

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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

June 2022 NAOWG Recommendations

- **Billing and Collections Agent Performance Review**
- **Billing and Collections Agent Requirements**
- **2022-2023 Budget and Contribution Factor**

June 2022 NAOWG Recommendations

- **Billing and Collections Agent Performance Review**

2021 Welch LLP Performance Review

Background:

- Developed the evaluation consistent with the monthly deliverable matrix. NAOWG evaluates Welch LLP performance monthly.
- Performance rating schematic used based upon Met/Not Met.
- Scheduled conference calls to gain industry consensus on rating and evaluation.

2021 Welch LLP Performance Review

The NAOWG considered, reviewed and analyzed the following data while compiling overall evaluation:

- Monthly deliverables matrix overall score
- 2021 team meeting materials (from monthly calls)
- FCC/NANC reports, monthly reports
- Customer Service, processes
- Monitoring of receivables
- NAOWG observations
- Co-chair and membership interaction with Welch LLP
- Contribution Factor and Budget related communication/printed material

2021 Welch LLP Performance Review

Welch LLP rating for 2021 was “MET” and is the recommendation of the NAOWG. This rating is defined below:

Met performance requirements

- Met requirements in order to be considered successful
- Performance was competent and reliable
- Decisions and recommendations were within requirements and expectations

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2021 Welch LLP Performance Review

- Welch continued collection of committed funds based upon Reassigned Numbers Database development costs in addition to the funds that support North American Number Administration.
- Welch Initiated collection of reimbursement funds
- Welch successfully provided appropriate accounting of RND and NANPA funds and reporting billing and collections into a monthly report.
- Welch maintained compliance with the Red Light Rule consistent with FCC 04-72.
- Welch was subject to four audits and provided all necessary information for successful on time completion of those audits.
- Welch manages multiple banking accounts associated with the collections and distributions of funds associated with the NANP and RND including credit card payment functionality resulting in decreased delinquent payments and reduced application of Red Light Rule.
- Welch prepared a detailed Operational Review for 2021, in an easy-to-follow format without being prompted to deliver.

Council Vote on the NAOWG Report and Recommendation

June 2022 NAOWG Recommendations

- **Billing and Collections Agent Requirements**

NAOWG Billing and Collections Agent Requirements

- NANC received Charge Letter from the FCC on March 25, 2022, as the FCC anticipates the B&C Agent contract expiration on April 30, 2023.
- The Charge Letter directed the NANC's NAOWG to recommend any updates and revisions of the *Statement of Work & Billing and Collections Agent Requirements* document to be submitted to the FCC no later than June 17, 2022
- The NAOWG met in 7 working sessions between April 4 through May 23 each typically lasting 1.5 hours

NAOWG B&C Agent Requirements Recommendations

The NAOWG recommends the NANC approve the *Statement of Work & Billing and Collections Agent Requirements* document as submitted

- NAOWG based its review of the B&C Agent requirements document upon existing oversight requirements
- NAOWG incorporated input from NAOWG membership and also incorporated FCC liaisons and B&C mediated confirmation of federal contract requirements and B&C agent current operations
- The NAOWG has observed and recommends that additional updates may be beneficial prior to the initiation of the competitive procurement process

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Council Vote on the NAOWG Report and Recommendation

Report of the North American Numbering Plan Billing and Collection Agent

Heather Bambrough, Welch LLP

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NANP FUND BUDGET AND CONTRIBUTION FACTOR FOR OCT. 2022 TO SEPT. 2023

To: North American Numbering Council Budget and Contribution Factor

Budget and Contribution Factor

The budget has been prepared to determine the funding requirements and the contribution factor for the upcoming funding period. The budget covers a 12-month period running from October 2022 to September 2023. We have determined that the total projected cost before the provision for contingency allowance and offset of the current year projected surplus is \$7,462,986. The Numbering Administration Oversight Working Group (NAOWG) determined that a \$1,000,000 contingency allowance be allowed for in the budget resulting in a total cost of \$8,462,986. The projected surplus of \$1,295,761 as per the April 2022 NANP report to the NAOWG will be used to offset the total funding requirement. This offset results in a total cost to be borne by US carriers of \$7,167,225. Rationale for this level of expenditure is included under the heading Basis for Projected Disbursements.

Based on the funding requirement discussed above and the projected revenue base of \$84 billion the resulting contribution factor is 0.0000853.

Revenue Contribution Base

The revenue base used both for billing purposes and the determination of the contribution factor continues to decline downwards. There was a 9% decrease in the revenue base over last year. The preliminary revenue figure of \$84 billion used for determining the contribution factor comes from the 2022 Form 499As received to date by USAC. For those carriers who have not yet submitted their 2022 Form 499A, the revenue figure used is that reported in 2021.

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Basis for Projected Disbursements

The numbering administration and pooling administration functions were combined into one contract. The contract was awarded to Somos. The contract is a 5-year contract that covers the period from December 1, 2020 to November 30, 2025. The cost for numbering and pooling administration provided in the budget is as per the contract. The International Participants (Canada and Caribbean member countries) will contribute \$179,550 towards numbering administration costs. Since the numbering and pooling administration are no longer separate contracts, Somos calculated that 43% of the total contract cost relates to numbering administration costs. Historically the NANPA costs were allocated 69% to numbering administration and 31% to CO code administration. The International Participants contribute only towards the numbering administration as the member countries perform their own CO code administration. Each member country's contribution is based on each country's proportionate percentage of the total average estimated population for the years 2022 and 2023. Their contribution is further discounted for numbering administration work done by each respective country (Canada – 25%, Caribbean countries – 66%).

The cost for the carrier audits as required under C.F.R 52.15 (k) and FCC Order FCC 00-42 is provided for as directed by the FCC.

The Billing & Collection Agent contract is for a 5-year period from May 1, 2018 to April 30, 2023. An RFP has not yet been issued. The cost provided for in the budget for the period October 2022 to April 2023 is as per the awarded contract. The cost for the period May 2023 to September 2023 is estimated using the current contract in existence.

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The cost for the Data Collection Agent is based on an estimate provided by USAC. If additional work is required due to new FCC initiatives, the cost could be higher.

The cost for the annual operations audit for the Fund is based on an estimate of the prior years' billing history of Ernst & Young LLP.

Bank fees are an estimate based on prior years' history.

Bad debts are an estimate of uncollectible accounts. This amount is based on prior years' history.

An estimate of the interest income earned from the bank is based prior years' history and current interest rates and cash balances.

Carriers are charged a \$100 fee when they do not file the Form 499A by the due date of April 30th. This fee is over and above the amount they are required to pay NANP to cover the costs of numbering administration. An estimate is based on historical patterns from previous funding years.

The contingency allowance is to provide for unknown additional costs at the time of the preparation of the budget. The following list includes some examples of costs that would be covered by the contingency fund.

- Change orders
- Costs related to change of scope of work of the contractors as mandated by the FCC
- Additional costs as a result of the Billing & Collection Agent contract awarded at an amount greater than provided for in the budget
- Any other costs not provided for in the budget

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NANP FUND BUDGET AND CONTRIBUTION FACTOR October 2022 to September 2023

	<u>2022/23</u>	<u>2021/22</u>
NANPA and Pooling Administration	6,980,336	6,980,336
Less NANPA Administration costs funded by International Participants		
Canada	150,192	150,157
Caribbean countries	29,358	29,043
Total Contributions by International Participants	<u>179,550</u>	<u>179,200</u>
Net total NANPA Administration and Pooling Costs	6,800,786	6,801,136
Carrier Audits	200,000	200,000
Billing & Collections Agent	340,800	340,800
Data Collection Agent	80,400	78,000
Annual Operations Audit	53,000	51,000
Bank charges	40,000	40,000
Bad debts	40,000	40,000
Interest income	(12,000)	(15,000)
Fees for filing Form 499A late	<u>(80,000)</u>	<u>(80,000)</u>
Total projected disbursements for October 2021 to September 2022 before contingency allowance	7,462,986	7,455,936
Contingency allowance	<u>1,000,000</u>	<u>1,000,000</u>
	8,462,986	8,455,936
Anticipated surplus at September 30, 2022 (per April 2022 NAOWG report)	<u>(1,295,761)</u>	<u>(3,492,218)</u>
Net US Carrier Contribution	<u>\$ 7,167,225</u>	<u>\$ 4,963,718.00</u>
Projected revenue base	<u>\$ 84,039,180,000</u>	<u>\$ 92,699,665,000</u>
Contribution Factor	<u>0.0000853</u>	<u>0.0000535</u>

June 2022 NAOWG Recommendations

- **2022-2023 Budget and Contribution Factor**

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Budget/Contribution Factor October 2022 – September 2023

The NAOWG recommends the proposed Budget and Contribution Factor

•The contingency fund was determined based upon consideration of potential change orders as well as potential unknown B&C Agent contract cost changes .

2022-2023:

Balance to be funded is: \$ 7,462,986

•Net US Carrier Contribution requirement: \$ 7,167,225

– This includes:

- (\$1,295,761) Surplus from 2021-2022
- \$1M contingency fund

Revenue base (estimate) – \$ 84,039,180,000

Contribution factor – 0.0000853

Prior year (2021-2022):

Revenue base (Actual) – \$ 92,763,617,648

Contribution factor – 0.0000535

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History of NANP Fund Size and Contribution Factor

	Contribution Factor		Revenue Base	% change over prior year	Per Budget				
	Final/Revised #	Original			** Total budgeted expenditures	International contribution	US contributions	Surplus used	Surplus kept
October 2022 to September 2023 (proposed)	0.0000853	0.0000853	84,039,180,000	-9%	8,642,536	179,550	7,167,225	1,295,761	
October 2021 to September 2022	0.0000535	0.0000535	92,699,665,000	-12%	8,635,136	179,200	4,963,718	3,492,218	
October 2020 to September 2021 ***	0.0001267	0.0001267	105,734,168,000	-14%	16,502,652	203,081	13,393,337	2,906,234	-
October 2019 to September 2020	0.0000908	0.0000908	123,540,363,000	-6%	11,436,421	257,618	11,178,803	-	-
October 2018 to September 2019	0.0000427	0.0000427	131,882,809,000	-9%	7,058,771	132,753	5,639,875	1,286,143	
October 2017 to September 2018	0.0000518	0.0000518	144,585,828,000	-8%	8,032,418	141,025	7,506,473	384,920	-
October 2016 to September 2017	0.0000368	0.0000368	157,184,628,000	-8%	6,816,306	141,334	5,775,123	899,849	-
July 2015 to September 2016	0.0000387	0.0000387	171,278,983,000	-7%	8,175,707	161,886	6,653,548	1,360,273	-
July 2014 to June 2015	0.0000365	0.0000365	183,925,723,000	-6%	7,165,926	124,400	6,721,854	319,672	-
July 2013 to June 2014	0.0000302	0.0000302	194,881,903,000	-3%	6,896,444	128,592	6,314,070	453,782	-
July 2012 to June 2013	0.0000254	0.0000254	201,642,172,000	-4%	6,187,045	94,923	5,139,392	952,730	-
July 2011 to June 2012	0.0000220	0.0000220	209,009,727,000	-5%	5,857,267	94,944	4,620,882	1,141,441	-
July 2010 to June 2011	0.0000181	0.0000181	219,588,500,000	-7%	5,497,882	96,439	4,034,718	1,366,725	-
July 2009 to June 2010	0.0000107	0.0000107	236,706,172,000	-0.4%	5,348,089	85,415	2,487,497	2,775,177	-
July 2008 to June 2009	0.0000165	0.0000165	237,616,278,000	2%	5,508,944	82,384	3,895,083	1,531,477	1,198,963
July 2007 to June 2008	0.0000193	0.0000193	233,170,743,000	0.4%	6,605,140	84,821	4,530,185	1,990,084	-
July 2006 to June 2007	0.0000210	0.0000210	232,219,745,000	1%	6,922,608	83,238	4,876,926	1,966,444	-
July 2005 to June 2006	0.0000052	0.0000052	230,362,437,000	-2%	6,903,158	84,050	1,127,108	5,692,000	-
July 2004 to June 2005	0.0000210	0.0000210	234,305,625,000	NA	7,026,013	80,468	4,920,418	2,025,127	4,248,064
July 2003 to June 2004 (revised)	0.0000210	0.0000360	NA	NA	9,821,530	114,205	4,902,967	4,804,358	4,000,000

** includes contingency allowance

*** includes RND creation costs

Final Factor reflects "Revised" factor if different from Original

Numbering Administration Oversight Working Group (NAOWG)
Members

NAOWG Members:

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

Future Meetings/Contact Information

2022 Meetings

Jun. 23
Jul. 28
Aug. 26
Sep. 29

Oct. 27
Nov. 17
Dec. 15

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

Philip Linse – philip.linse@lumen.com

Robert McCausland – mccaus13@gmail.com

Questions?

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Council Vote on the NAOWG Report and Recommendation

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**North American Numbering Council (NANC)
Call Authentication Trust Anchor (CATA) Working
Group (WG)**

**Adoption of Caller ID Authentication Technology
and Other Techniques to Combat Robocalls by
Policymakers and Providers in Countries outside
the United States**

June 14, 2022

Co-Chairs:

Beth Choroser, Comcast

Jackie Wohlgemuth, ATIS

CATA WG Charge

Report no later than June 15, 2022 “recommending steps to encourage adoption of caller ID authentication technology and other techniques to combat robocalls by policymakers and providers in countries outside of the United States, especially when that adoption would benefit U.S. consumers .” The report was to address the following:

1. Provide observations on progress made toward combatting robocalls in other countries, and the effect this progress, or lack thereof, has on U.S. consumers.
2. Identify whether foreign voice service providers and/or other countries have adopted caller ID authentication technologies, whether under the STIR/SHAKEN framework or under different frameworks.
 - Provide observations about the level of deployment of caller ID authentication technology in other countries, and how such deployment affects the ability of U.S. providers to combat robocalls terminating to U.S. consumers from overseas.
 - Provide available detail about the successes or difficulties experienced with the various technologies deployed.
 - Where relevant, identify whether there are barriers to the exchange of caller ID authentication information between different systems.
 - If there are such barriers, recommend how these barriers can be overcome.

CATA WG Charge (cont.)

3.Recommend specifics on how the STIR/SHAKEN framework can be used by U.S. voice service providers and intermediate providers to combat illegal robocalls originating outside the United States and received by U.S. consumers.

4.Recommend steps the Secure Telephone Identity Governance Authority and other members of the industry can take to encourage the adoption of caller ID authentication technology—including the STIR/SHAKEN framework—in other countries.

5.Recommend whether Commission engagement with other countries could be helpful to encourage the adoption of caller ID authentication technology—including the STIR/SHAKEN framework.

- If such engagement is recommended, identify priority countries for engagement and suggest specific steps and/or technical capacities that would promote successful implementation.

Background for Report

- Recommendations in this report apply to three categories of calls because the full benefits of caller authentication are only realized if all calls are authenticated by the originating service provider. These categories of calls that originate outside of the U.S. include calls with a:
 - U.S. number in the caller ID,
 - Non-U.S. number in the caller ID,
 - U.S. number in the caller ID from U.S. mobile customers roaming internationally.

Progress on combatting robocalls outside U.S.

- Canada has broadly deployed STIR/SHAKEN for VoIP traffic
 - Discussions between the STI-GA in the U.S. and the Canadian Secure Token Governance Authority (CST-GA) have started to formally address cross-border STIR/SHAKEN representing the first instance of official support for cross-border call authentication between countries.
- Technical issues will need to be overcome and could be different with each country and end-to-end testing among service providers will be critical.
- Different countries may ultimately adopt different call authentication solutions; however, they must be interoperable and properly enabled in service provider networks to be effective.

Adoption of caller ID authentication technologies by foreign voice service providers

- Canada - Mandate deadline was November 30, 2021
- France - Required in-service July 24, 2023
- Ireland – Report due to ComReg mid-year; final report due early 2023

Adoption of caller ID authentication technologies by foreign voice service providers (cont.)

- Observations about the level of deployment of caller ID authentication technology in other countries, and impact on U.S. consumers.
 - Each country has its own independent “zone-of-trust” (i.e., calls authenticated in one country cannot automatically be verified in the other).
 - U.S. and Canada are in discussions, and once a French GA is established the three countries could allow caller ID authentication amongst them.
 - The report discusses non-jurisdictional approaches that could also be considered to expand the “zone of trust” if supported by foundational principles.
- Details about the successes or difficulties experienced with the various technologies deployed.
 - STIR/SHAKEN is the only approach to achieve widespread, standards-based, multi-vendor deployment in live networks; results of French MAN WG study support this.
- Identify barriers to the exchange of caller ID authentication information between different systems and how these barriers can be overcome.
 - Translational boundaries may exist between caller ID authentication mechanisms
 - The use of a consistent standards-based caller ID authentication mechanism, such as STIR/SHAKEN, is the best approach to avoid barriers.

Using STIR/SHAKEN by US voice and intermediate providers to combat illegal robocalls originating outside the U.S.

The STIR/SHAKEN framework is an end-to-end technology and requires that international carriers implement a compatible caller ID authentication technology, either by themselves or through a third party, for call authentication for calls that originate/terminate outside the U.S.

Once STIR/SHAKEN, or another compatible call authentication mechanism, is deployed internationally, the STI-GA can begin the process of working with international peers on mutually accepted policies for authenticating international calls. This will require consideration of the following:

Using STIR/SHAKEN by US voice and intermediate providers to combat illegal robocalls originating outside the U.S. (con't.)

- Protocol interoperability: Select a suitable Service Provider Code identifier to use instead of the Operating Company Number (OCN) where applicable.
- Trust Anchor: An update to [ATIS-1000087] is required to address merging of Certificate Revocation Lists (CRLs) after approval by the applicable governance authorities.
- Authorization: The U.S. STI-GA must authorize merging a foreign trust anchor into the ecosystem.
- Trust criteria: Each governance authority, as part of governance policies, must define how to maintain the integrity of the SHAKEN ecosystem within its domain. That includes a means to support the foundational principles of inclusiveness, security, and accountability.

STI-GA Steps to Encourage Caller ID Authentication Technology Adoption

- Develop a webinar and/or report on available resources
- Document Canadian/U.S. coordination
- Define key considerations for implementation (e.g., interoperability and enforcement handoffs)
- Develop criteria under which international trust anchors implement cross-border STIR/SHAKEN

Commission Engagement outside U.S.

- Potential FCC outreach to and collaboration with international counterparts, including:
 - Encouraging adoption of caller ID authentication that is interoperable with STIR/SHAKEN;
 - Encouraging establishment of a governance structure similar to the U.S. and Canada (e.g., based on ATIS standards) and adoption of criteria consistent with principles of inclusiveness, security, and accountability;
 - Encouraging cooperation among national authorities and global service providers (e.g., identify impediments that may limit cooperation);
 - Entering into MOUs to share best practices and enforcement strategies as appropriate;

Commission Engagement outside U.S. (con't.)

- Educating foreign regulators on STIR/SHAKEN implementation and other robocall mitigation tools including guiding foreign counterparts to willing U.S. experts;
- Encouraging foreign regulators to mandate cooperation in traceback; and
- Encouraging foreign regulators to identify regulatory roadblocks that limit service providers' willingness to implement robocall mitigation practices (e.g., lack of safe harbors for inadvertently blocking an occasional legal call).

Commission Engagement outside U.S. (cont.)

- Priority countries for engagement include:
 - India
 - Pakistan
- Engage with foreign regulators and industry ecosystems to:
 - Encourage implementation of common or compatible call authentication mechanisms, and
 - Collaborate on enforcement to encourage proper use of call authentication and expose when entities are not properly using call authentication

Logistics

- Meetings pertaining to this third report were held:
 - January 18, 25
 - February 1, 8, 15, 22
 - March 8, 15, 22, 29
 - April 5, 12, 19, 26
 - May 3

Membership

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

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Closing

Q&A

Co-Chairs	FCC Liaisons
Jackie Wohlgemuth, ATIS jwohlgemuth@atis.org	Jonathan Lechter Jonathan.Lechter@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

NANC Meeting
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Adjourn