

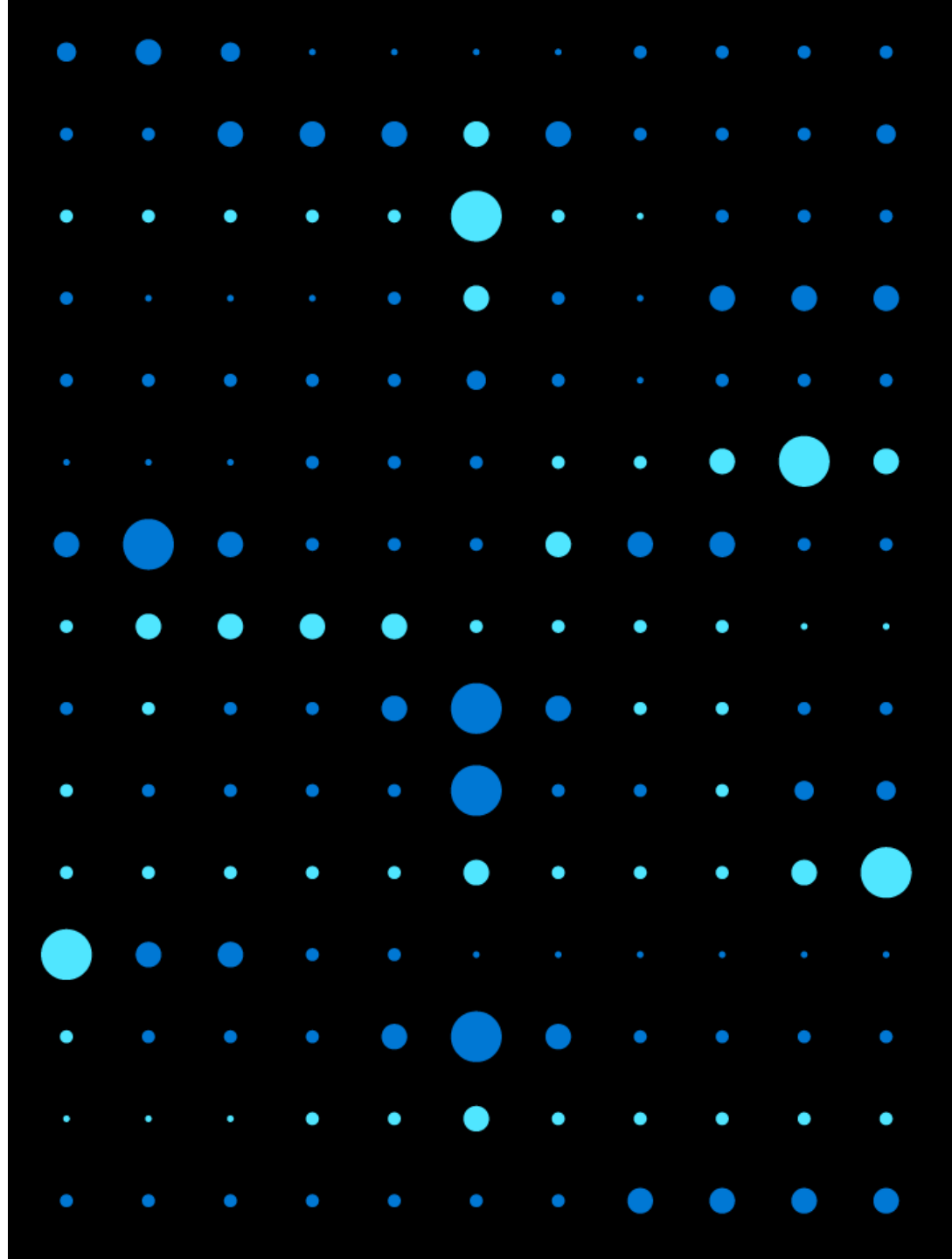
# Achieving compliance

Service Providers' Perspectives on  
the STIR/SHAKEN milestone

21 July 2021

metaswitch

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# Panellists

- Peter Brown, Metaswitch
  - QCall STIR/SHAKEN Product Manager
- Lavinia Kennedy, TNS
  - Director of Product Management
- Lulia Barakat, Verizon
  - Senior Manager, Network Planning
- Ryan Mitchell, WOW! Internet, Cable & Phone
  - VP Engineering, Network Products & Services



# Agenda – Service Providers' perspectives

- Brief recap of what has been achieved/required for June 30th
  - STIR/SHAKEN
  - Analytics
- Panel questions
- Summary of STIR/SHAKEN and market evolution
- Panel questions
- Q&A

# The STIR/SHAKEN milestone

Achieving the requirements of 30<sup>th</sup> June 2021

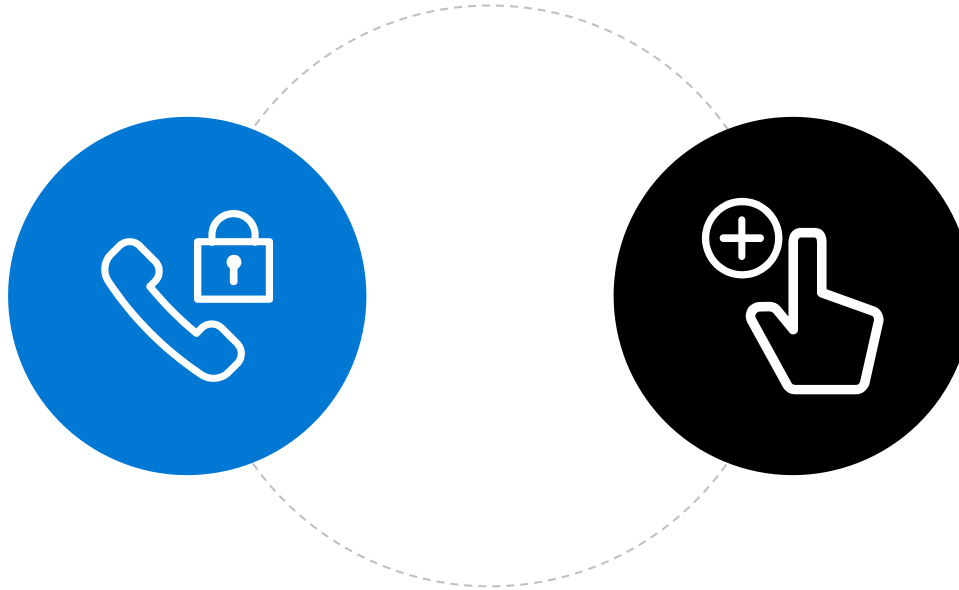
I love deadlines; I like the wooshing sound they make as they fly by”  
– Douglas Adams, *The Hitchhiker's Guide to the Galaxy*

# 30<sup>th</sup> June deadline has focused on Regulatory mandate

## Regulators require

- rapid deployment of call authentication wherever possible
- outbound robocall mitigation everywhere else

(Deployment of robocall blocking to protect consumers is not currently required)



## Subscribers need

- to stop getting robocalls and other types of nuisance and malicious calls
- to be able to trust caller ID
- to expect calls to be ones they want to take
- to trust the phone again!

**Service Providers have been striving to meet all the above**

# Recap #1: STIR/SHAKEN – “required” as of 30<sup>th</sup> June



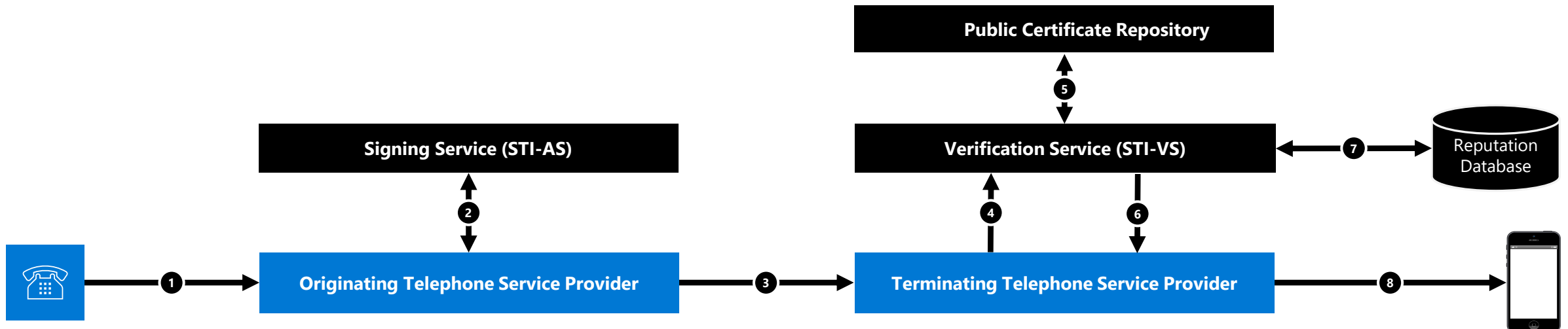
**STIR and SHAKEN - SIP standard that prevents caller ID spoofing**

- Caller ID signed by the Originating Service Provider
- Caller ID verified by the Terminating Service Provider
- Authentication and Verification using certificates
- **On its own, does not prevent robocalls or nuisance calls**



**Industry favored approach in North America**

- USA: Several large carriers announced production in 2019; mandated via TRACED Act by June 2021 (June 2023 for smaller carriers)
- Canada: CRTC require network readiness by November 2021



# Recap #2: Robocall analytics – optional as of 30<sup>th</sup> June



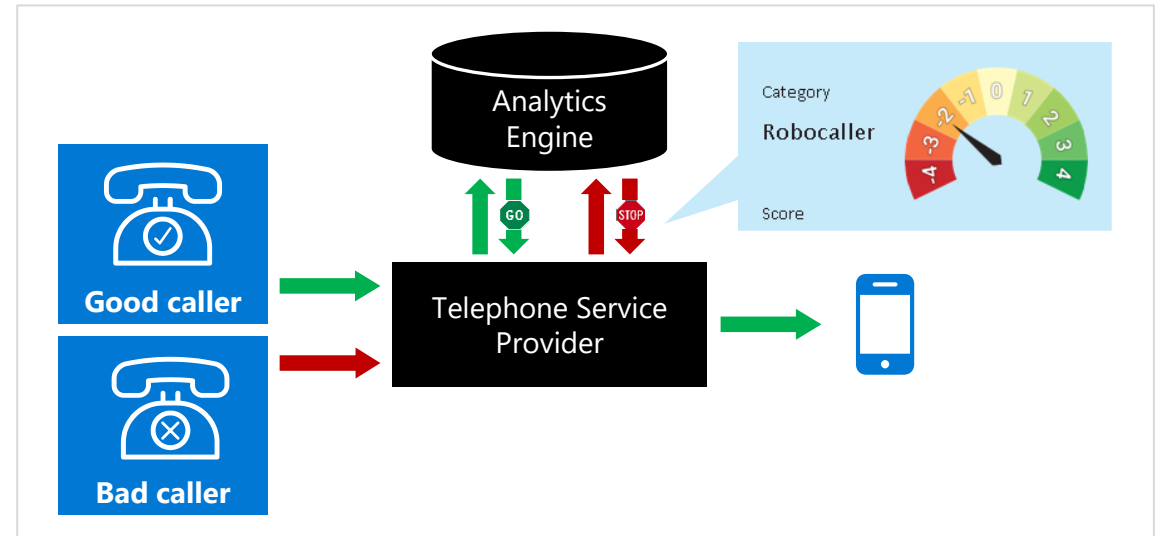
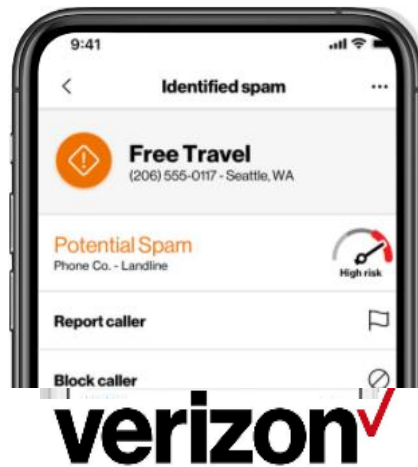
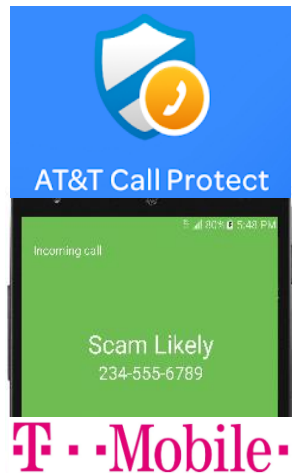
**Problem is continually evolving as bad callers change their behavior**

**Reputation Database technology provides effective solutions today**

- List of phone numbers with associated spam scores
- Effective databases updated in real-time from multiple sources

**This works well but is not a silver bullet**

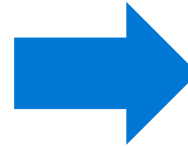
- Bad callers are adapting, e.g. varying their Caller ID more frequently
- Does not protect owner of a spoofed number



# STIR/SHAKEN and Analytics working together

## Each on its own is only a partial solution...

	Robocall analytics	STIR/SHAKEN
Works on SIP traffic	✓	✓
Works on TDM traffic	✓	✗
Authenticates caller-ID	✗	✓
Tells you about motive/intentions of caller	✓	✗
Useful on outbound and inbound traffic	✓	✓
Helps with FCC-mandated robocall mitigation programs	✓	✗



## ... but the combination ticks all the boxes...

Analytics and STIR/SHAKEN together	
Handles all your traffic	✓
Means your subscribers can trust caller-ID again	✓
Means your subscribers won't be wrongly wary of callers	✓
Makes them more likely to pick up the phone	✓
Helps you satisfy the regulators' demands	✓

... provided that you also build and follow processes that use them

**Note: Policies and processes are the responsibility of the Service Providers**



# Call Guardian Authentication Hub

*Provides STIR/SHAKEN and Analytics both in-network and as managed service*

metaswitch

**QCall**

STIR / SHAKEN

**Transaction  
Network Services**

**Call Guardian**

Analytics / Reputation Database



- Complete solution for robocall prevention
- Deployed at Tier 1s and a wide range of other Service Providers
- Managed service eliminates some of the hurdles for Service Providers
  - predictable subscription, with low up-front cost outlay
  - no new network equipment required
  - fast time-to-market

# Panel questions

Achieving the June 30<sup>th</sup> deadline

# Evolution of STIR/SHAKEN

# STIR / SHAKEN is still evolving

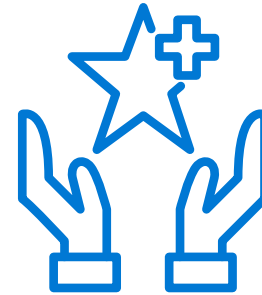


Enterprise A-Level  
attestation issue

- Central TN Registry
- Delegate Certificates
- DLT (Blockchain)

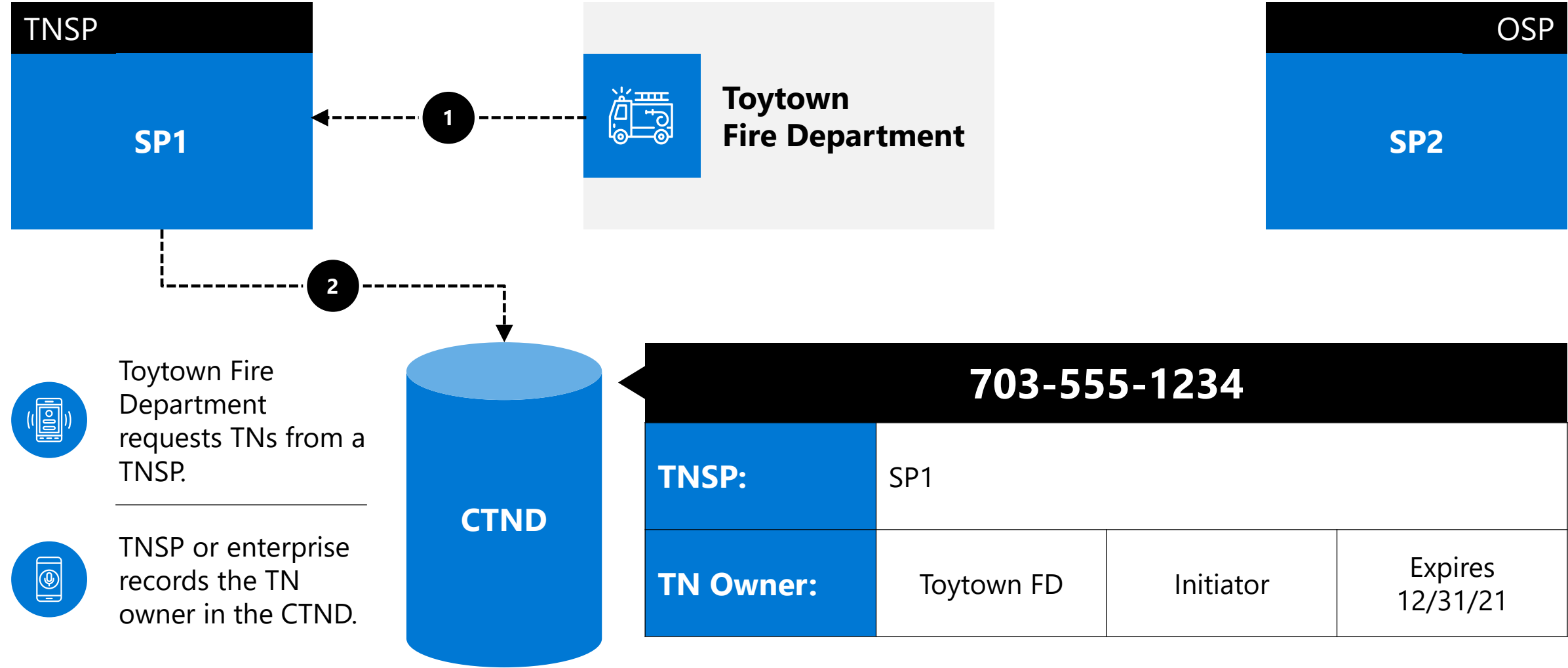


STIR / SHAKEN is not  
supported over TDM

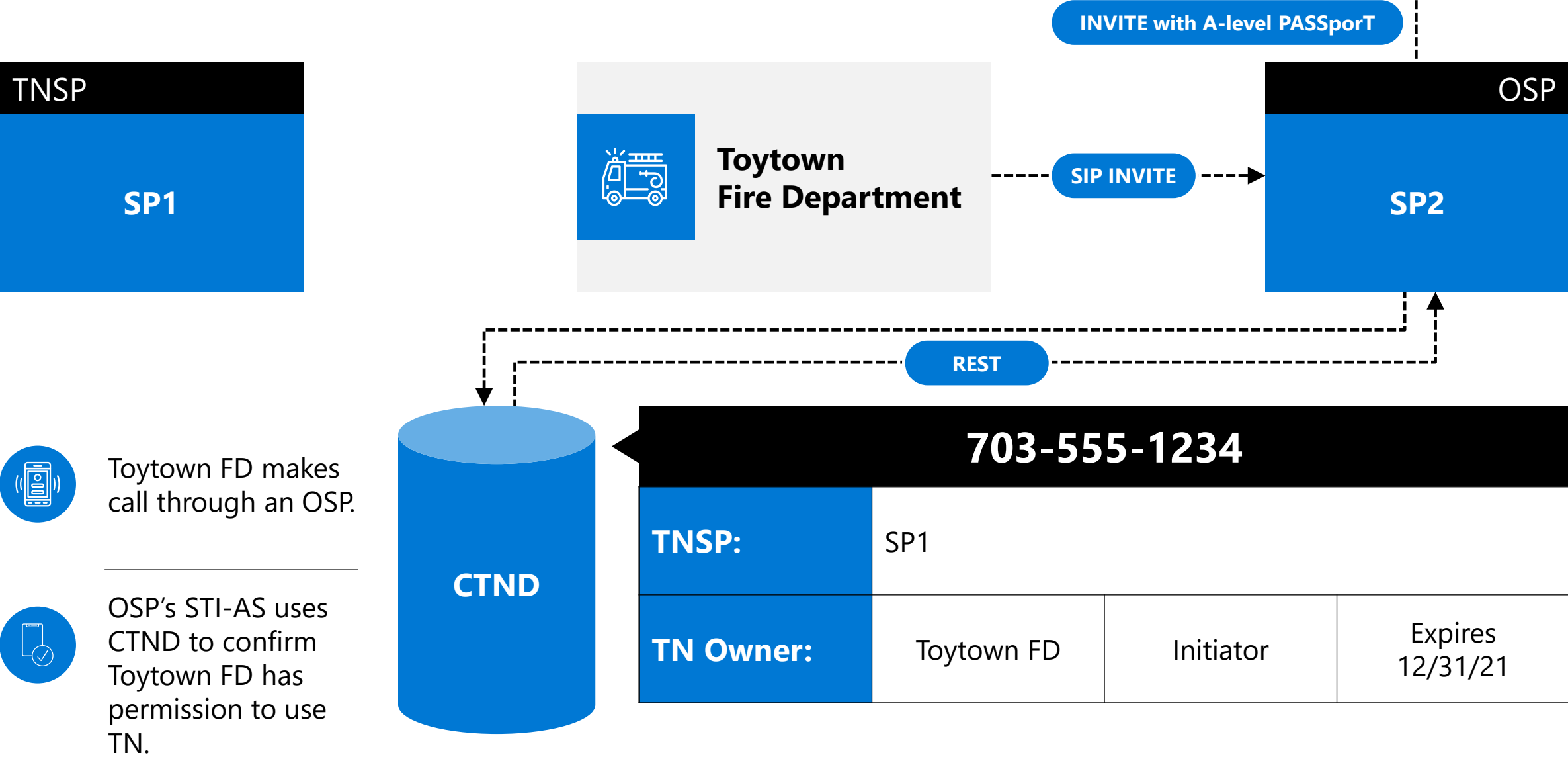


Developing SHAKEN  
standards

# Centralized database: simple enterprise TN assignment



# Centralized database: simple enterprise call flow



# STIR / SHAKEN is still evolving



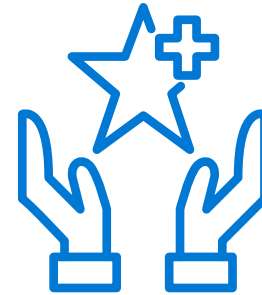
Enterprise A-Level  
attestation issue

- Central TN Registry
- Delegate Certificates



STIR / SHAKEN is not  
supported over TDM

- TDM transport of PASSporTs
- Call Placement Server



Developing SHAKEN  
standards

- Diverted calls
- RPH
- Rich Call Data

# Robocall Trends



# Top Scams

- Donation
- Auto warranty
- Debt collection
- Home buying
- Political



## Fraudsters Target Police and Firefighter Fund Donations

June 8th, 2021 - Telecom, Identity and Protection

By Jim Tyrrell, Senior Director of Product Marketing, TNS

Police and firefighters have a purpose to protect you, your family and your community. You may feel inclined to support these workers in any way you can, but do not be so quick to trust a call from a charity asking for donations to fire and police funds.

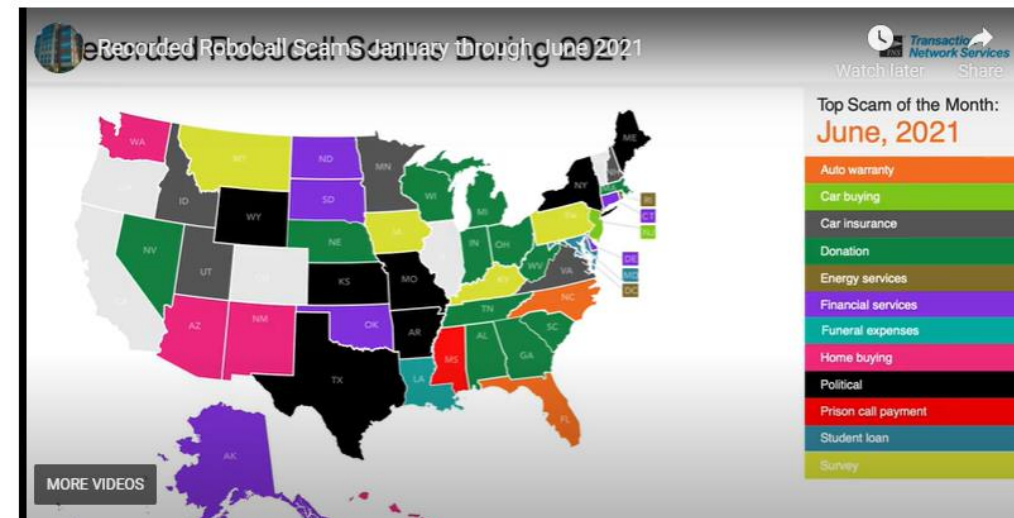
TNS has found fake fundraising for police and firefighters as a top scam operating today. These fraudsters may pose as a legitimate charity, make up a fake organization name that sounds trustworthy or even create a registered charity but misuse funding. Having the word "police" or "firefighters" in a charity's name does not unfortunately confirm any of the money raised is benefiting these groups or that police and firefighters are even a part of them, according to the [Federal Trade Commission](#).

Donations are a great way to support causes you hold close to your heart, but scammers are notoriously good at tricking those who are passionate about an issue and want to help through funding, so it is important to be very cautious when making donations. Some legitimate non-profit organizations have confirmed they do not solicit donations over the phone. For example, the National Police Foundation does not solicit donations from anyone via phone, according to their [website](#). There is no safe way to confirm the identity of the caller, so never give your credit card, address or other personal information over the phone.

The best approach is to make sure the organization you want to support does not have ill intentions through research. Visiting [the IRS website](#) can confirm if the company is a legitimate, tax exempt charity. The website [Charity Navigator](#) is a great tool to use when checking the usage of funds for all legitimate charities. These websites give charities a rating based on how they are using donations and break down where the money is really going. You can also directly call your police or fire station and confirm if the organization calling is really working with them.

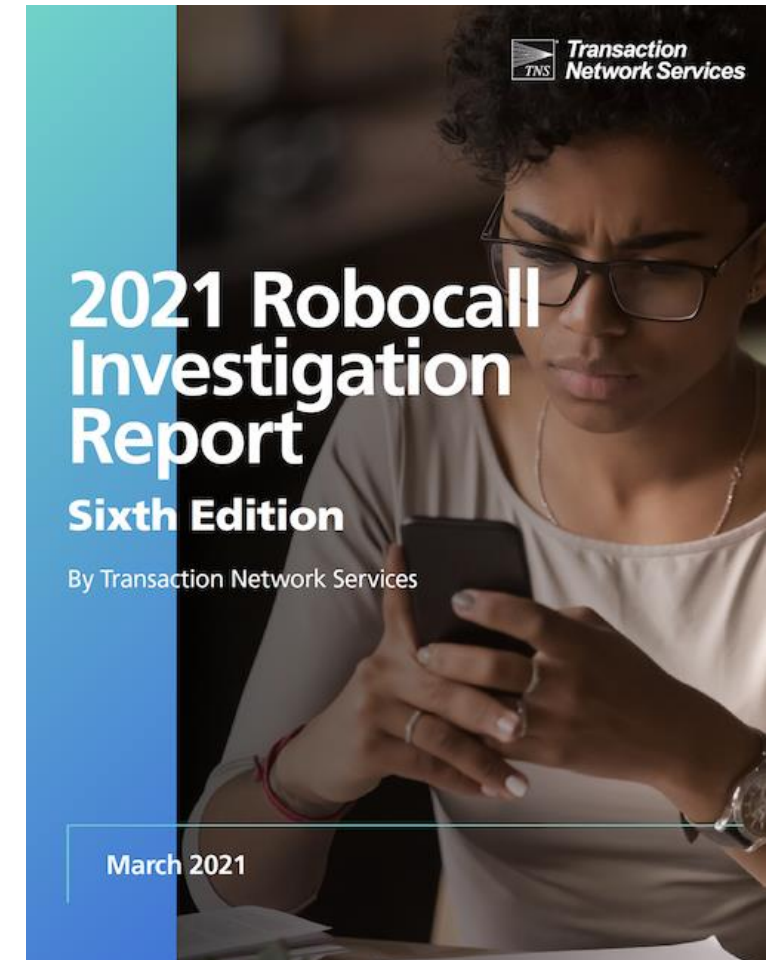
In addition, consumers can protect themselves by leveraging robocall detection solutions powered by TNS Call Guardian. In these trying times, vigilance is even more important than before; be smart and stay safe.

## Top Robocalls Scams by State



# Robocall Trends

- **Leading US Tier-1 Carriers Remain a Small Part of Robocall Problem.** Total calls (wanted and unwanted) by the Tier-1 carriers account for 67% of the total volume, yet nearly 95% of high-risk calls originated from numbers not owned by Tier-1 carriers last year, up three percentage points from 2019.
- **Broader Tier-1 Adoption Of STIR/SHAKEN Contributed to Reduced Robocalls.** More than one-third of the total calls traversing carrier networks in December 2020 were self-signed by a voice service provider ensuring the caller is verified, up from 21% in January 2020.
- **Neighbor spoofing tactics have shifted and continue to increase.** Use of the same metropolitan area codes to call a subscriber (near-neighbor spoofing) has increased 17% in the same period
- Seventh Edition will come out in September 2021



# Panel questions

Evolution of STIR/SHAKEN and anti-robocalling

# Wrap-up & Q&A

# For further information

- ✓ Metaswitch Landing page and accompanying KB articles
  - Landing page: <https://www.metaswitch.com/solutions/voice/robocall-blocking>
  - Summary of STIR / SHAKEN and analytics: <https://www.metaswitch.com/blog/solving-the-robocall-problem>
  - What is STIR / SHAKEN? <https://www.metaswitch.com/knowledge-center/reference/what-is-stir/shaken>

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- ✓ Call Guardian Authentication Hub on Communities
  - <https://community.metaswitch.com/support/solutions/articles/76000014382-call-guardian-authentication-hub-overview>

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- ✓ Robocall mitigation requirements
  - <https://community.metaswitch.com/support/solutions/articles/76000038592>

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- ✓ Metaswitch blog posts on setting attestation and origination
  - <https://www.metaswitch.com/blog/where-should-i-implement-stir-/-shaken-in-my-network>
  - <https://www.metaswitch.com/blog/stir-shaken-how-do-i-tag-calls-in-my-network>

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## THANK YOU