



SIPNOC 2024: Standards and Industry update and more

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Historical Context and STIR/SHAKEN

The Evolution of Robocalling and Call Authentication

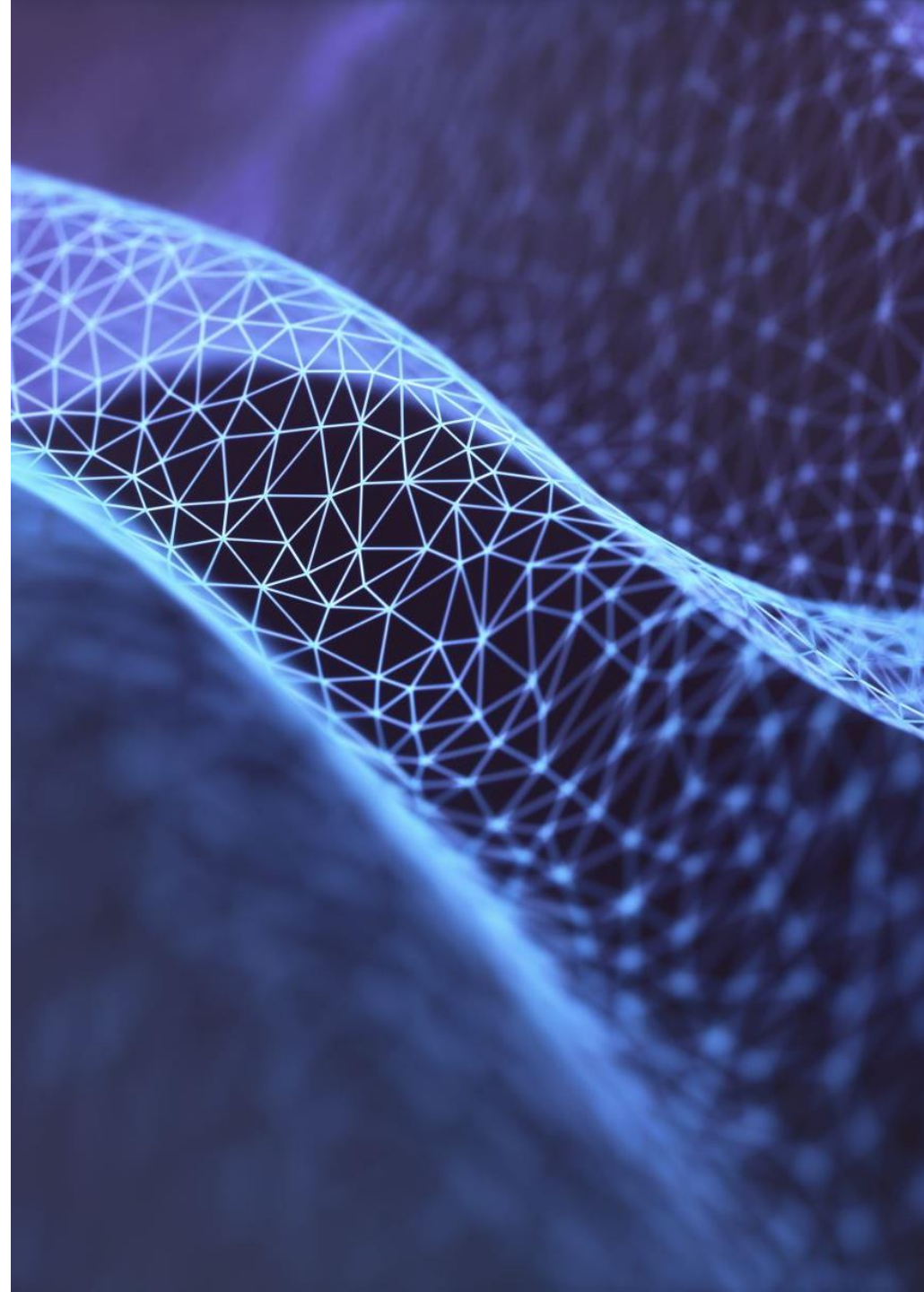
- Robocalling as a primary fraud vector
- STIR/SHAKEN introduced to reduce spoofing and enhance trust
- Current adoption status in the U.S.
- Robocalling is an ongoing battle

Timeline:

- **2013:** IETF begins development of the STIR framework to combat caller ID spoofing.
- **2016:** FCC hosts workshops and forms the Robocall Industry Strike Force to tackle the growing robocall issue. The task force establishes key concepts like Do Not Originate and the STIR/SHAKEN framework.
- **2017:** FCC issues Report and Orders mandating the adoption of STIR/SHAKEN for caller ID authentication and encouraging industry efforts.
- **2018:** Establishment of the STI-GA, based on the recommendations from the NANC CATA Working Group's first report, to oversee the deployment and certification of the STIR/SHAKEN framework.
- **2019:** Congress passes the TRACED Act, giving the FCC the authority to enforce STIR/SHAKEN adoption and implement penalties for non-compliance.
- Canada establishes the CST-GA, mirroring the U.S. STI-GA to oversee the Canadian implementation of STIR/SHAKEN.
- **2020:** ATIS releases specifications for cross-border STIR/SHAKEN, ensuring call authentication can be verified between the U.S. and Canada.
- **2021:** STIR/SHAKEN framework is fully deployed for IP-based voice networks in the U.S.
- **2023 and beyond:** Ongoing efforts continue to integrate STIR/SHAKEN internationally and address challenges for non-IP networks.
- **2024:** France and Brazil turning on requirements to implement STIR/SHAKEN frameworks.

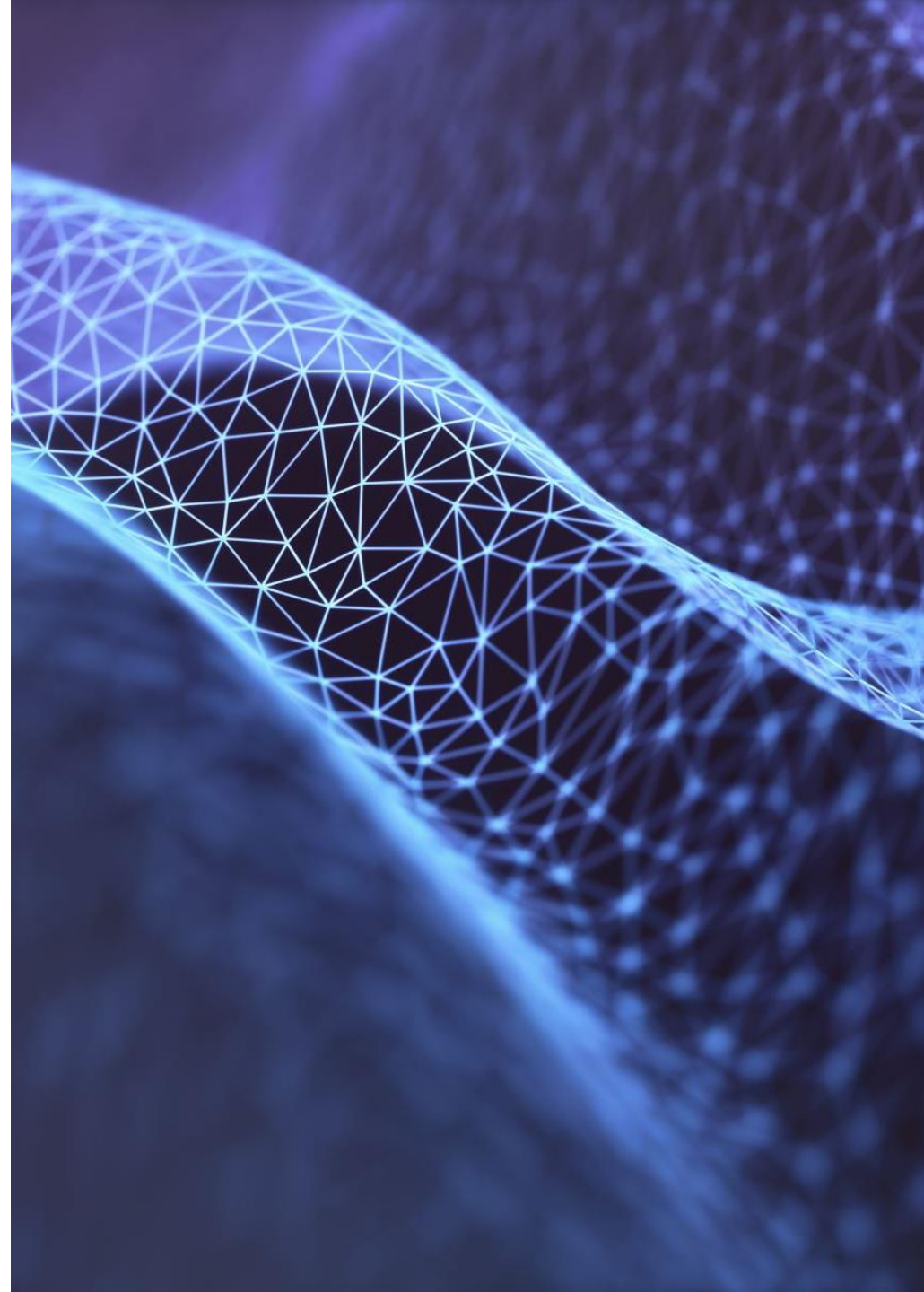
Current Activities: ATIS/SIP Forum IPNNI Joint Task Force

- Advancements in Call Authentication
 - Refining STIR/SHAKEN: ATIS-1000092 delegate certificates usage
 - Rich Call Data Updates: ATIS-1000094
 - Addressing gaps in non-IP networks – NIPCA OOB
 - Expanding internationally – Cross-border ATIS-1000087.v002
 - Messaging Landscape Document – Assessing Messaging Space to provide industry guidance around potential use of STIR/SHAKEN or other authentication techniques
 - Revisiting IPNNI SIP Profile document to align it with STIR/SHAKEN updates



Current Activities: IETF STIR Working Group

- **draft-ietf-stir-certificates-shortlived-00** - Short-Lived Certificates for Secure Telephone Identity
- **draft-ietf-stir-certificates-ocsp-08** - OCSP Usage for Secure Telephone Identity Certificates
- **draft-ietf-stir-rfc4916-update-05** - Connected Identity for STIR
- **draft-ietf-stir-servprovider-oob-06** - Out-of-Band STIR for Service Providers
- **draft-ietf-stir-passport-rcd-26** - PASSporT Extension for Rich Call Data
- **draft-ietf-sipcore-callinfo-rcd-12** - SIP Call-Info Parameters for Rich Call Data



Regulatory: FCC & FTC and NANC CATA

- Continuing Regulatory Updates
 - FCC continuing guidance on STIR/SHAKEN
 - International call path verification
 - FCC/FTC/AGs focus on enforcement against fraudsters
 - Key upcoming regulations
- NANC CATA reports
 - Roaming impacts report
 - In progress – Report on Direct Number Access



Internationalization: Challenges and Opportunities

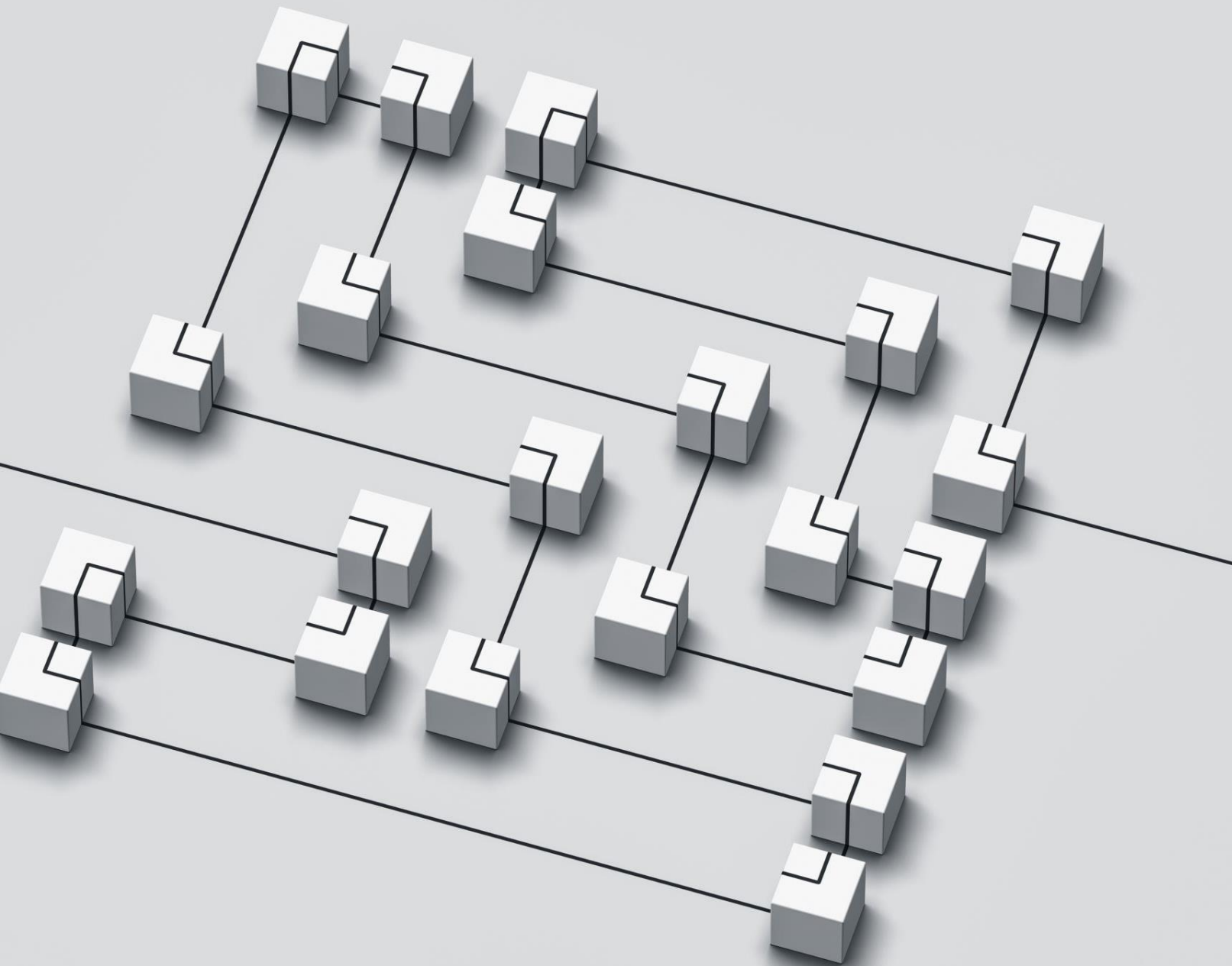
- Bridging the Global Divide
 - Challenges in international STIR/SHAKEN adoption
 - Regulatory, technical, and infrastructure barriers
 - The need for global cooperation on call authentication or trust across country codes
- Cross-boarder initiatives
 - STIR/SHAKEN STI-GA cooperation/agreements
 - Non-jurisdictional approaches
 - i3Forum – One Consortium/GIRAF



Calling the Customer - TCPA / AI & Consent

- Balancing Consumer Protection and Business Needs
 - Overview of the Telephone Consumer Protection Act (TCPA)
 - Importance of consumer consent in automated communications
 - Challenges in balancing convenience with fraud protection





AI and Deepfakes

- The New Frontier of Fraud
 - The growing threat of AI and deepfake voice manipulation
 - Potential impact on robocalling and phishing attacks
- Industry just starting to evaluate need/effectiveness for AI-driven detection tools and stronger identity verification

Future of Call Authentication for Enterprises

- Expanding Trust to the Enterprise Customer
 - Importance of call authentication for sectors like healthcare, finance, and government (with popular and valuable threats for targeting fraud)
 - Emerging frameworks for enterprise-level call authentication
 - Enhancing trust in B2B and B2C communications



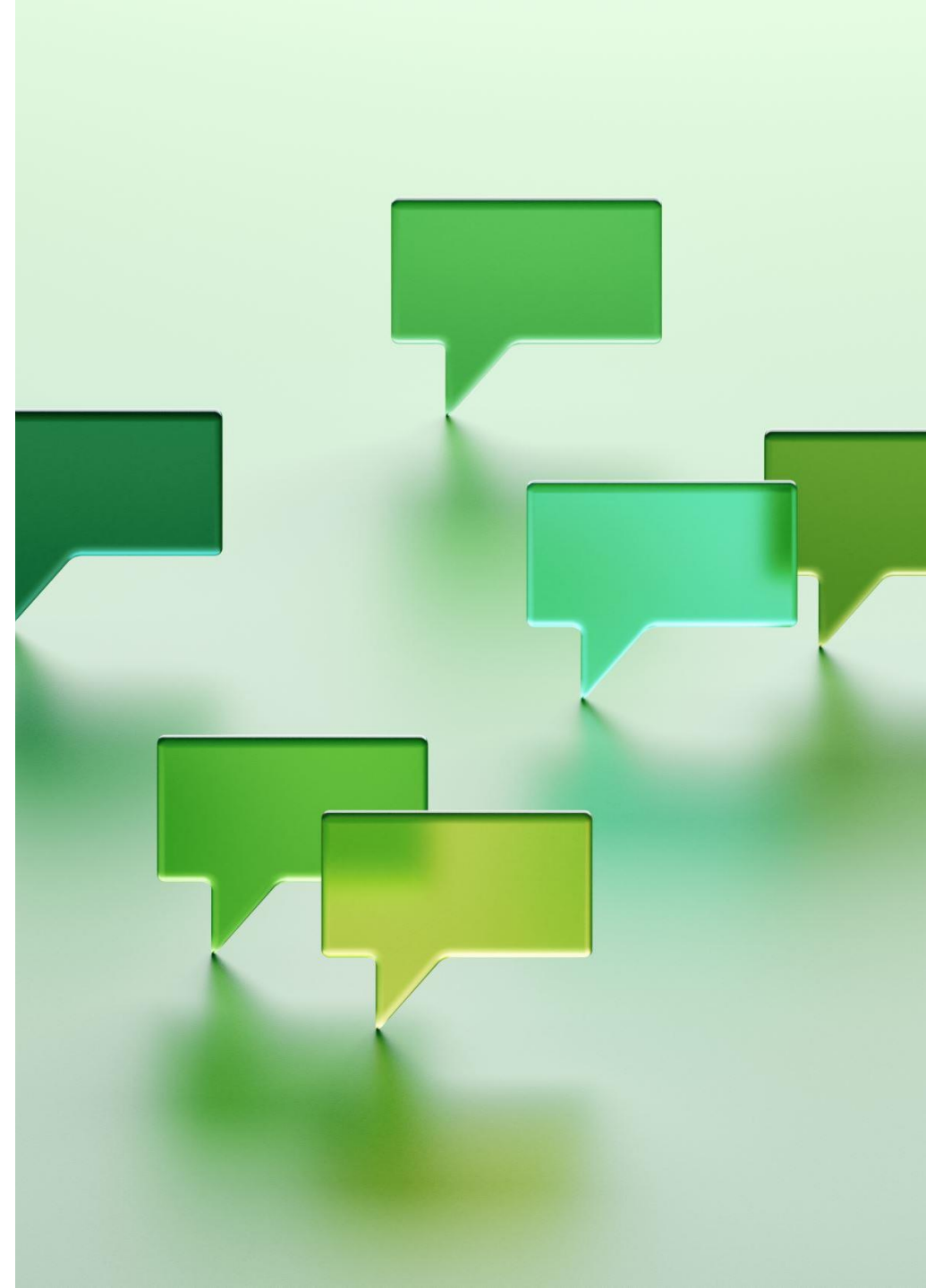


Vetting & KYC: The Path Forward

- Building Trust Through Authentication
 - Importance of vetting and Know Your Customer (KYC) for securing communications
 - How businesses and consumers can be vetted for authenticity
 - The role of KYC in fraud prevention and call authentication
 - How do we implement consistently?

vcon: Call and Message Archival and Analytics

- A New Approach to Archival and Analytics: vcon
 - **What is vcon?**
 - A data container format designed to encapsulate all relevant communication artifacts (voice, text, metadata) from calls and messages into a single, verifiable package.
 - **Purpose:**
 - Provides a standardized way to archive, analyze, and audit interactions such as call center records and text message exchanges.
 - **How It Works:**
 - Encapsulates media (voice, video, text), metadata (timestamps, participants), and analysis (transcriptions, sentiment analysis).
 - Enables seamless integration with AI and machine learning for enhanced analytics.
 - **Benefits:**
 - Improves transparency and trust in customer service operations.
 - Enhances regulatory compliance (e.g., TCPA, GDPR).
 - Supports forensic analysis and quality monitoring in call centers.





Conclusion

- The Path Forward in Trusted Communications
 - STIR/SHAKEN progress and challenges ahead
 - Need for global cooperation and technology evolution
 - Tackling AI fraud and enhancing enterprise trust
- Broadening the conversation is key.
- Alignment on solving fraud at its source is key.
- It's going to be a great few days of conversation!