PURE CALLERID

WHITE PAPER

Understanding Spam Tagging
How Major Mobile Carriers Flag Calls and What It Means for Your Business

Abstract

This white paper provides a comprehensive look at how major U.S. mobile carriers and other industry players identify, label, and sometimes block calls deemed "spam." It explains the core technologies and processes—such as STIR/SHAKEN caller ID authentication and carrier-specific analytics—while highlighting how third-party applications and consumer device settings influence the tagging environment. It also clarifies the impact of proper caller identity management (CNAM), the importance of consistent branding, and the limitations that come from a fragmented regulatory and technical landscape. Finally, this document outlines what is within your organization's control and what is not, helping you better understand how to manage call reputation and maintain positive customer engagement.

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1. Introduction

As unwanted and fraudulent calls have surged, U.S. mobile carriers, third-party developers, and device manufacturers have introduced more sophisticated methods of detecting and tagging "spam." While these measures protect consumers, they can also inadvertently affect legitimate businesses. Understanding how spam tagging works is essential for organizations looking to maintain high answer rates, preserve brand integrity, and ensure that vital calls reach their intended recipients.

2. The Core Players in Spam Tagging

Major U.S. Carriers:

AT&T, Verizon, and T-Mobile employ proprietary analytics and the STIR/SHAKEN framework to authenticate caller identities. They offer branded services—such as AT&T Call Protect, Verizon Call Filter, and T-Mobile Scam Shield—that apply machine learning and historical data analysis to identify spam or fraudulent calls. If a number is flagged, the call may be tagged with labels like "Spam Likely" or "Potential Spam."

Third-Party Spam-Blocking Apps:

Independent apps like **Nomorobo, Truecaller, and Hiya** rely on large user bases and community feedback to identify spam callers. Through crowdsourcing and AI-driven analysis, these apps maintain extensive lists of reported spam numbers. While carriers and remediation services can help improve call reputation at the carrier level, third-party apps have their own ecosystems and reporting processes that are not easily influenced by outside entities.

Device Manufacturers:

Apple, Google, and Samsung incorporate spam detection features into their native phone apps. Users can report unwanted calls directly on their devices, feeding into the manufacturers' algorithms. Because this process is user-driven and decentralized, individual devices can label legitimate calls as spam without input from carriers or remediation services.

3. Technologies and Standards Impacting Spam Tagging

STIR/SHAKEN Framework:

At the core of modern call authentication is **STIR/SHAKEN**, a suite of protocols that cryptographically verify call origination. While adoption is widespread among major carriers, smaller
carriers and certain VoIP providers are still catching up, resulting in inconsistent application.

Carrier-Specific Reputation Analytics:

Carriers employ internal algorithms and external analytics providers to assess call patterns. Sudden spikes in volume, repeated calls to unresponsive numbers, or an influx of user complaints can degrade a caller's reputation, raising the risk of spam tagging.

CNAM Registration and LIDB:

Caller Name (CNAM) registration in the Line Information Database ensures that your organization's name appears accurately on caller ID. Although proper CNAM data alone

does not guarantee immunity from spam tagging, it helps reduce false positives and improves recipient trust.

4. The Broader Landscape

Impact on VoIP and Wireline Numbers:
VoIP numbers are easier to obtain and often subject to spoofing, placing them under greater scrutiny. Wireline numbers (landlines) face fewer automated tagging mechanisms but still rely on basic forms of caller verification.

Over 800+ Telco Carriers and No Universal Blacklist:
The U.S. market's fragmentation—over 800 carriers with different policies and infrastructures—complicates the spam tagging landscape. Without a single unified blacklist or standardized approach, a number might be tagged differently depending on the carrier or region.

U.S. vs. Canada and U.S. Territories:
The U.S. and Canada both implement STIR/SHAKEN but follow different timelines and enforcement protocols. U.S. territories, though guided by U.S. regulations, face their own market and infrastructure challenges, further diversifying the spam tagging environment.

5. The Business Impact of Spam Tagging

Call Answer Rates and Customer Trust:
When legitimate business numbers are tagged as spam, answer rates decline. Customers are less likely to pick up calls labeled "Potential Spam," affecting sales, customer service outreach, and overall brand perception.

Regulatory Pressures and Compliance:
As regulatory bodies push for stronger caller authentication, businesses must stay compliant. Organizations that do not adapt to evolving standards risk increased spam tagging and potential penalties.

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6. What You Can and Cannot Control

Within Your Control:

» **Accurate CNAM Registration:** Ensure your caller ID displays consistent and recognizable information.
» **Call Campaign Strategies:** Maintain consistent calling patterns; avoid sudden spikes in volume that can trigger carrier algorithms.
» **Reputation Monitoring:** Keep track of your numbers' reputations, adjusting tactics and rotating numbers if certain lines become compromised.

Outside Your Control:

» **Carrier-Level Algorithms:** You cannot directly manipulate carriers' internal tagging systems or algorithms.
» **Third-Party App Databases:** User-reported data in apps like Truecaller or Nomorobo is not easily overridden, limiting your ability to clean up your reputation in these independent ecosystems.
» **Device-Specific Features:** Smartphones and operating systems have spam detection that you cannot directly influence.

7. Pure CallerID: Monitoring, Remediation, and Best Practices

Who We Are:

Pure CallerID specializes in monitoring and remediation services designed to minimize spam tagging of your phone numbers. We focus on engaging directly with carriers and analytics providers—where meaningful remediation can occur—to help restore and maintain a clean caller reputation.

Our Approach:

» **Direct Carrier Integration:** We work closely with the carriers and their analytics partners. By utilizing authorized pathways, we help influence how carriers interpret and label your numbers.

» **Data-Driven Insights:** Our system continuously monitors over 100 data points, searching for early signals that a number may be at risk of spam tagging. These signals include call volume changes, call answer rates, and potential user complaint spikes.

» **Remediation and Rotation:** If we detect that remediation with the carrier is not possible or proves ineffective, we advise on rotating numbers. This proactive approach ensures that calls continue to go through while minimizing disruptions to your business.

» **Limitations:** While **Pure CallerID** excels in working with carriers and their analytics providers, we cannot override third-party apps or device-level reporting mechanisms. We also cannot guarantee 100% protection, as external factors—such as user behavior and unregulated databases—are beyond our direct control.

Benefits to Your Business:

» **Improved Deliverability:** By leveraging our expertise and carrier relationships, you increase the odds that your calls are viewed positively and answered more frequently.

» **Actionable Insights:** With continuous data monitoring, you receive timely recommendations to maintain optimal caller ID health, including when to rotate numbers and how to adjust calling strategies.

» **Transparent Reporting:** **Pure CallerID** keeps you informed about changes in your numbers' reputations, enabling you to make data-driven decisions and avoid reputational damage.

8. Best Practices and Recommendations

» **Verify Caller ID Continuously:** Ensure that CNAM data remains accurate and updated.

» **Maintain Consistent Call Patterns:** Avoid behaviors that may trigger carrier suspicion, such as calling excessively large volumes of new numbers in short windows.

» **Educate Your Teams:** Train your internal teams on the importance of reputation management and how to respond quickly if spam tagging escalates.

» **Work with a Remediation Partner:** Partnering with a specialized service like **Pure CallerID** provides ongoing monitoring and access to carrier-level remediation channels unavailable to individual businesses.

9. Conclusion

Spam tagging arises from a complex ecosystem of carriers, third-party applications, device manufacturers, and ever-changing regulatory standards. While no single solution can guarantee complete immunity, understanding the landscape and working with specialists can significantly reduce your risk.

By maintaining accurate caller identities, adhering to best practices, and leveraging the expertise of services like **Pure CallerID**, your business can minimize spam tags, preserve brand integrity, and ensure that the calls you place are more likely to be answered by the customers you value most.

For more information or assistance with call reputation management, please contact **Pure CallerID** at **(844) PURECID**.