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Case Study – Tri-County Communications Mitigates Originating and Terminating Robocalls

About Tri-County Communications Cooperative

Tri-County Communications is a communications cooperative, offering high-speed Internet, cable TV, and phone services in rural west central Wisconsin. As a cooperative, its customers are its owners so Tri-County takes its commitment to customer service, reliable services, and investment of time and resources in their communities as an integral part of their business

An FCC Mandate to Stop Robocalls?

Malicious robocalls used for spam attacks or worse, as fraudulent scams, are seen by both residential and business customers every day. Everyone agrees they need to be stopped. In the US, the Federal Communications Commission (FCC) addressed the robocall problem by mandating voice service providers implement a solution known as STIR/SHAKEN which uses signed certificates to ensure the validity of the call originator. The deadline for STIR/SHAKEN implementation was June 30, 2021.

However, recognizing there are many smaller voice service providers who would be unable to meet this deadline because STIR/SHAKEN only applies where there is IP network connectivity, the FCC identified requirements that would allow these providers to be granted a 2 year extension. Notably, if an extension was granted, the FCC also mandated the voice service provider would have to deploy a robocall mitigation program by June 30, 2021, to prevent illegal robocalls from being originated on their network.

Ribbon Call Trust® For Originating Robocall Mitigation

Tri-County Communications was granted a two year extension for the implementation of STIR/SHAKEN, so they were obligated to implement an originating robocall mitigation program.

As an existing Ribbon customer with an C15 Call Session Controller and a Session Border Controller Software Edition (SBC SWe) it was natural for Tri-County to look to Ribbon for a solution for originating robocall mitigation. Our response was to introduce our Ribbon Call Trust solution which provides a suite of identity assurance services for robocall mitigation and STIR/SHAKEN.

More specifically, Tri-County utilizes Ribbon's cloud-hosted Reputation Scoring service to prevent the origination of illegal robocalls in real-time. For each originating call on the C15, a SIP INVITE is sent to the SBC SWe, which will, as the default route, send the SIP INVITE to Ribbon's Reputation Scoring service for an assessment of the reputation of the caller. Reputation Scoring service uses local and national data to score the call indicating the likelihood that the call is being originated for malicious purposes or is otherwise legitimate. Based on policy configuration and the reputation score, an appropriate SIP response code will be returned so the call is allowed to proceed or it is blocked. For legitimate calls the SBC will either route advance to an outgoing IP trunk or forward the SIP response to the C15 for the call to be route advanced on an outgoing TDM trunk. For calls that should be blocked, the SBC will return the SIP message to the C15 where the final call treatment will be executed.

Ribbon Call Trust Plus Innovative Systems To Address Terminating Robocall Mitigation

Meeting the FCC mandate was certainly important, but it only addresses the use case to prevent malicious robocalls from originating on Tri-County Communications network. What was also important to Tri-County was their residential and business customers who were concerned about nuisance calls they were receiving and how it was disrupting their lives and businesses. To address this problem and to increase customer satisfaction, Tri-County Communications also invested in a terminating robocall mitigation solution from Ribbon.

Tri-County Communications had previously deployed Innovative Systems' APMAX for advanced TDM and IP telephony features, including the APMAX's Terminating Call Manager feature, which screens inbound trunks for calls using invalid caller ID. This solution worked well for terminating robocall mitigation, but it was possible to enhance robocall mitigation by integrating APMAX with Ribbon's Reputation Scoring service.

In a joint effort between Innovative Systems and Ribbon, APMAX can send real-time queries to Ribbon's Reputation Scoring service and receive back reputation scores that are used to determine the optimal method to terminate each call. A call that is considered legitimate will be allowed to proceed normally, while a call that is clearly malicious in intent can be blocked. And for calls that are potentially, but not clearly malicious, the APMAX and the C15 will have other call termination options, such as routing the call to an announcement or altering caller ID to "potential spam" so the called party can make the decision whether or not to answer the call.

For this project, Innovative Systems took the lead on project integration and testing to ensure Tri-County Communications was optimally addressing terminating robocall mitigation. "Tri-County Communications is taking their role as robocall gatekeepers very seriously," said Scott Sobolewski, Vice President of Sales, Innovative Systems. "The combination of APMAX TCM

Call Screener with Spoof Blocking, and the Ribbon Reputation Scoring service provides Tri-County's customers the highest level of protection on the market."

An Integrated Solution For Today and Tomorrow

"Ribbon's Call Trust solution significantly enhances our ability to make informed decisions on how to treat both originating and terminating calls in our network by adding to our APMAX call termination capabilities for both TDM and IP traffic," said Buck Webb, Chief Operating Officer, Tri-County Communications. "We now have an automated solution to identify and mitigate robocalls. We feel this combination of services on both originating and terminating calls has been very effective in dramatically reducing the number of complaints we receive."

As can be seen in Figure 1 below, a single integrated solution enables Tri-County to meet their FCC mandate for originating robocall mitigation and address the needs of their customers for terminating robocalls mitigation.

By going with Ribbon for robocall mitigation, Tri-County also gains a significant advantage when their time comes to implement STIR/SHAKEN. As part of the same Ribbon Call Trust portfolio Tri-County will be able to subscribe to Ribbon's cloud-hosted STIR/SHAKEN as a Service and leverage the same C15 and SBC already in place to handle robocall mitigation.
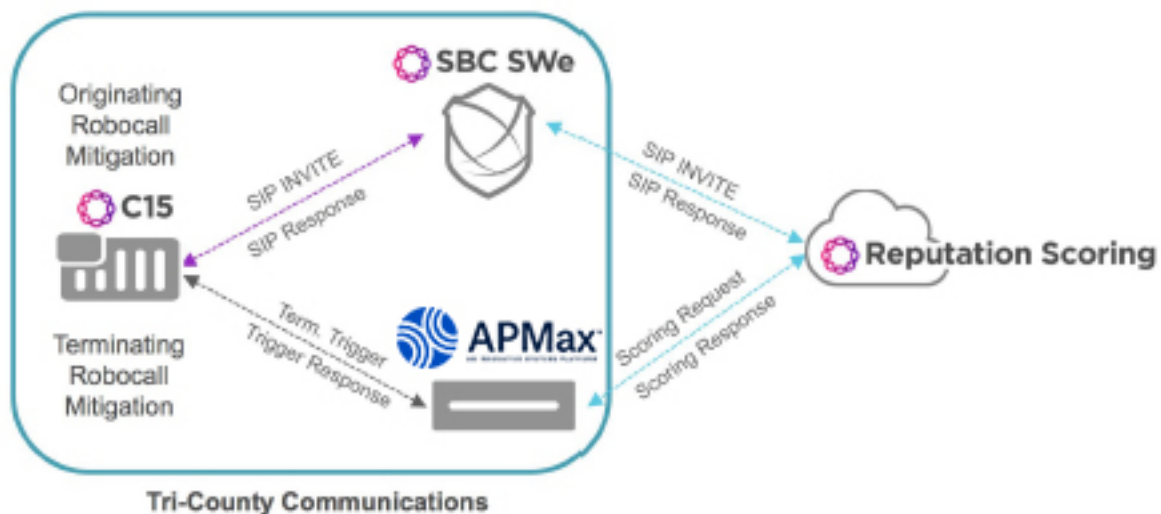

Figure 1. An Integrated Solution for Originating and Terminating Robocall Mitigation