



# ***The New Wave of Robocallers Costing Businesses Billions***

November 2015

MARCHEX 

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## SECTION I – OVERVIEW

# Spam Calls: The Billion Dollar Problem

Enterprise businesses that manage large volumes of sales over the phone have, for years, struggled to defend themselves against a seemingly intractable problem: spam calls. These unwanted calls are more than a mere nuisance – they significantly impact productivity and cut into a business’s bottom line. The problem is getting worse with evolving tactics and technologies. It’s now easier than ever for spammers to flood business lines with automated calls.

Marchex examined more than 300 million calls placed to businesses in 2014 through its Marchex Call Analytics platform and found that call centers across the U.S. receive more than 100 million spam calls a year. The lost productivity from answering these calls is estimated to cost businesses \$1 billion a year.<sup>1</sup> In fact, Marchex found that a single business line can receive as many as 32,000 spam calls per year.



Most spammers today leverage caller ID spoofing, which means they use technology that applies a fake telephone number to a caller ID, thereby masking the identity and number of the caller. Marchex found that for some business lines, as much as 85% of spam is from callers with spoofed caller IDs. Spoofing has been widely used by auto-dialers to place millions of robocalls with little time or effort.

Data showed that 35% of all calls placed in the U.S. are robocalls, which means that robocalls have actually eclipsed live telemarketing calls. In essence, for every 10 phone calls, three to four will be unwanted robocalls.<sup>2</sup> Robocalls use new technologies to auto-dial or play a pre-recorded or artificial voice<sup>3</sup> when a call is picked up. These calls then announce a message, play music, or simply broadcast silence. For businesses, robocalls equate to a massive drain on time and money.

Marchex found that the following spam practices are most onerous to businesses today:



### **Robocalls**

From 2012 to 2015, automated calls to businesses jumped 150%.



### **Toll-Free Pumping**

This year has seen a massive surge in toll-free pumping, representing as much as 5% of total 2015 Toll Free traffic.



### **Political Robocalls**

Nearly 1.5 billion calls were placed during the 2012 presidential elections alone, according to Marchex data.



### **Fax Spam**

Fax machine spammers churn through a large volume of numbers, seeking to connect with other fax machines and send advertisements.

## SECTION II – PRACTICE ATTRACTIVENESS

# Why Is This Happening Now?

The explosive growth of mobile has brought with it a corresponding rise in fraudulent calls. Spammers evolve their techniques rapidly, exploiting the fast-changing landscape of the mobile ecosystem. Legislators and government agencies are scrambling to keep up with this growing problem; in 2013, the Federal Trade Commission even offered to sponsor a \$50,000 reward for a technological solution to curb illegal robocalls.

There are a few reasons why robocalling is so attractive.

1

### **It's highly lucrative.**

When you make a long distance call, that call is generally handled by a number of telephone companies. Under today's FCC rules, the long distance company pays a fee (called an access charge) to the local carrier that delivers the call to the called party. Traffic pumping occurs when a local carrier with high access charge rates enters into an arrangement with another company with high call volume operations, such as chat lines or free conference calls. The arrangement inflates or stimulates the number of calls into the local carrier's service area, and the local carrier then shares a portion of its increased access revenues with the free service provider, or provides some other benefit to that company. The local company's profits from such an arrangement are typically so great that its charges become unreasonable and unlawful under FCC regulations.

2

### **There are low barriers to commit rampant fraud.**

The Voice over Internet Protocol (VoIP) technology makes robocalling almost as cheap as e-mail and extremely easy. Phone numbers can be purchased, scraped from public records, or just inferred. In addition, caller ID spoofing technology has allowed perpetrators to slip past caller ID and many carrier-provided number blocking systems.

3

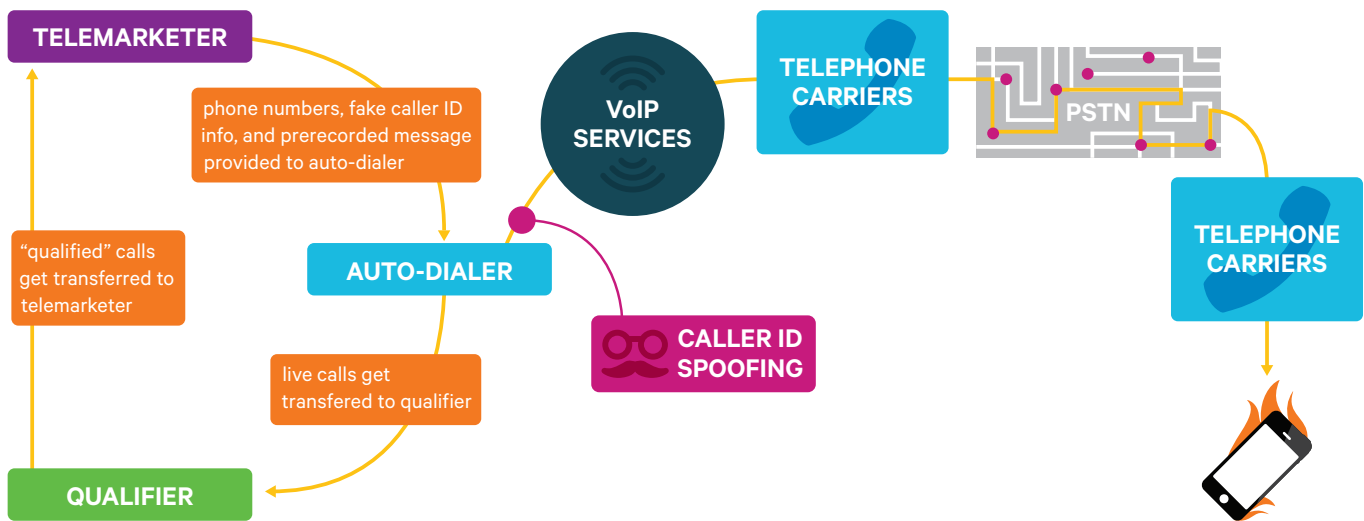
### **Spam calls are hard to trace.**

Traditionally, calls could be traced back to an origin number and linked to a physical location. However, auto-dialers can quickly assume a different number by spoofing caller ID, which makes it impossible to discover its source. In addition, by using VoIP technology, perpetrators can run their operations from anywhere in the world. They literally only need a reliable Internet connection and a cellphone app to place millions of robocalls.

## What is Traffic Pumping?

Traffic Pumping is a method used to artificially generate calls to toll-free telephone number for the purpose of financial gain. It is an industry-wide challenge currently impacting carriers nationwide, and can impact anyone who owns a toll-free phone number or uses one through a call analytics service. Perpetrators also use caller ID spoofing to get around spam and fraud detection systems.

## Technology makes robocalling cheap and easy.



### SECTION III – EVOLUTION

## Robocalling and Spam Prevention: A Game of Tag

Auto-dialers have not always been this savvy. Perpetrators have expanded their breadth, scale and speed over the last decade to match the fast-changing dynamics of the mobile call experience.

Robocalls traditionally targeted seniors with landlines. The older the phone number, the more likely it was to get robocalls.

Traditional spam prevention solutions looked at the caller ID to determine whether or not to block a caller.

Spam filters evolved to detect and block robocalls, even when they used caller ID spoofing.

Auto-dialers spoofed, or hid behind familiar numbers, to fool caller ID, which enticed people to pick up. Today, 85% of robocalls use fake caller IDs.

Spammers innovated their robocalling tactics by including silence, noise or music on the line.

In Nov. 2015, Marchex announced a major breakthrough technology which blocks robocalling that spoofed caller IDs and simulated conversations, silence or music, representing a 306% improvement over caller ID-based technology.

## SECTION IV – PROTECTION

# What Can You Do to Protect Yourself?

Traditional call spam prevention technologies rely on interactive voice response (IVR) systems to identify if the caller is human or not. When a call is received, the system runs the caller ID against the internal database and identifies the caller as a current prospect, customer or unknown. If the caller ID is unknown, the system automatically introduces an IVR such as “Thank you for calling [company name]. If you know your party’s extension number, you can enter it at any time. For Sales and Customer Service, press 1. For our employee directory, press 7. Or press 0 to speak with a representative.” While this approach might help businesses prevent some of the call fraud, it might predispose their customers or prospects to take their business elsewhere. We all know navigating a phone tree is not entertaining, especially if it commands you to press one for one thing, two for something else, and by the time you get to seven, you already forgot your options so you are a captive listener... again. Unless, of course, you hang up.

However, basic, properly designed IVRs could weed out some of the exasperating spam calls that businesses are getting. The problem is that the new spammers not only fake their caller IDs, but recently, they have also learned how to bypass the IVRs, finding new ways to adapt to the industry’s latest obstacles. So it turns out, technologies solely relying on IVRs to detect and prevent call spam aren’t sufficient anymore to solve for today’s sophisticated robocalls. Marketers need a solution that can identify and block spoofed caller IDs, without exclusively relying on traditional IVRs.

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## SECTION V – ADDITIONAL RESOURCES

### Marchex Clean Call Breakthrough Technology

This year, Marchex’s patented technology, Clean Call, became the first and only breakthrough technology to block robocalls, even when caller IDs are spoofed, without just relying on IVRs. With Marchex’ Call DNA, we can proactively identify and catch the warning signs of call spam before they even become an issue.

Marchex is constantly monitoring the audio signals from 300+ million tracked lines, which allows our product pioneers to detect fraud in real time and shield businesses from it. Marchex uses advanced digital signal processing and machine learning techniques to safeguard our clients from an extensive range of call spam types: fax, telecom tones, silence, music, noise, end recorded messages, all without relying on the caller ID, which can potentially be spoofed. As perpetrators have expanded their breadth, scale and speed over the last decade to match the fast-changing dynamics of the mobile call experience, Marchex has rapidly perfected its Clean Call technology in tandem.

In 2014, Marchex blocked 65 million spam calls, which translated into \$49 million cost savings.



**65 million**  
*calls blocked in 2014*



**\$49 million**  
*estimated cost savings*

## SECTION VI

# What's Next

To get detailed data about spam call activity for your company through the Marchex Institute's spam call research, or to have Marchex create mobile advertising campaigns and analyze campaign data for your company, contact authors Cristina Ramchandani [cramchandani@marchex.com](mailto:cramchandani@marchex.com) or Jason Flaks [jflaks@marchex.com](mailto:jflaks@marchex.com). Or visit us at [www.marchex.com](http://www.marchex.com) or [@marchex](https://twitter.com/marchex) on Twitter to learn more.

**We'd love to hear from you!**

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## SECTION VII

# About Marchex

Marchex is a mobile advertising analytics company that connects online behavior to real-world, offline actions. By linking critical touchpoints in the customer journey, Marchex's products enable a 360-degree view of marketing effectiveness. Brands and agencies utilize Marchex's products to transform business performance.

Please visit [www.marchex.com](http://www.marchex.com), [blog.marchex.com](http://blog.marchex.com) or [@marchex](https://twitter.com/marchex) on Twitter (Twitter.com/Marchex), where Marchex discloses material information from time to time about the company, its financial information, and its business.



### **Marchex Call Analytics®**

Marchex Call Analytics, a real-time mobile advertising platform that measures sales and consumer intent from mobile, click-to-call campaigns.

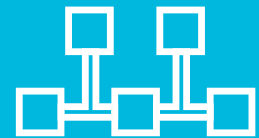
Advertisers such as Time Warner Cable and agencies such as Resolution Media use Marchex Call Analytics to measure and grow mobile sales.



### **Marchex Call DNA®**

Marchex Call DNA is the only conversational analytics technology that automatically classifies, scores and visually maps every phone automatically, even for advertisers that do not use call recording.

Advertisers such as ADT Home Security and T-Mobile use Call DNA to measure and optimize click-to-call campaigns.



### **Marchex Call Marketplace™**

Marchex Call Marketplace is a click-to-call advertising network that enables advertisers to generate high-quality phone leads directly from mobile Web and in-app ads across hundreds of top publishers and apps.

Advertisers such as State Farm Insurance and Intercontinental Hotels Group use Marchex Call Marketplace to reach and acquire new customers.

## SECTION VIII

# Marchex Institute



### **CRISTINA RAMCHANDANI, Sr. Product Marketing Manager**

Cristina Ramchandani is Senior Product Marketing Manager at Marchex. Since 2012, Cristina has consistently turned clients into evangelists, while helping them grow. In close partnership with her clients, she hockey-stick grew their service marketplace from \$70M to a \$250M great success. In January 2015, Google acknowledged her blood, sweat, tears, relentless hours and unwavering faith by awarding the North America Premier SMB Partner Award for “Highest Growth” to her client. With a full-time MBA in Marketing and a proven passion for building and monetizing customer loyalty, Cristina has continued to stay customer focused, creating evangelists who are engaged, excited, and thrilled to tell others about Marchex.



### **JASON FLAKS, Director, Product & Engineering**

Jason Flaks is the Director of Product and Engineering for the Call Intelligence organization at Marchex. The Call Intelligence team is responsible for all Audio, Speech and Natural Language Processing related software and products at Marchex. Jason has a 15+ years of experience in leading and managing audio and speech related software projects. He holds an MS degree from the University of Miami in Music Engineering and has over 23 patents granted and another 10 pending in the audio and speech domains. Prior to joining Marchex Jason worked for Microsoft and was the primary driver of the speech and audio components of the Xbox Kinect and HoloLens product. Before Microsoft Jason worked for several years in the R&D divisions of Dolby Laboratories and Gibson Guitars.



## ABOUT THE MARCHEX INSTITUTE

The Marchex Institute is a team of data scientists and senior analysts that deliver customized reports and insights for clients of our Call Marketplace and Call Analytics products. These findings inform business decisions and measurably boost ad campaign returns. The Institute’s insights and analyses have landed headlines in The Wall Street Journal, USA Today, Forbes and other national media outlets.

1. <http://www.marchex.com/2015/06/01/robocall-problem-and-the-next-generation-call-spam-protection/>
2. <http://www.consumerreports.org/cro/magazine/2015/07/rage-against-robocalls/index.htm>
3. <https://consumercomplaints.fcc.gov/hc/en-us/articles/202873880-Rules-and-Resources-for-Dealing-with-Unwanted-Calls-and-Texts>