



White Paper: The Impact of Call Blocking - UPDATED

Over the past two years, PacificEast has fielded many questions about call connection rates, high rates of ring-no-answer calls and tritones back from apparently active phone numbers. This white paper walks through the history and causes and highlights why recent regulatory changes have created a problem for organizations reaching out to their audiences by phone. Most importantly, we shed light on how to resolve this issue.

Editor's Note: The services and technology available to help solve the Carrier Call Blocking challenge has evolved quickly in the last few months. We have updated this whitepaper, now to Version 3, to reflect new information and suggestions we believe will be of value to those who perform enterprise-level consumer engagement.

“If you don't know who the call is from, don't answer it”

In the era of rampant robocalling, most of us have given this advice to a friend or family member. At PacificEast, we've shared it with our parents, in-laws, kids, and friends—and the advice does limit annoying or dangerous calls and scams. But there is a downside to this recommendation. For those who cut the cord and only use a cell phone for calls, following this advice risks missing calls you might want to receive if you knew who is calling. If you're among the myriad businesses and organizations in the US making those calls—calls consumers specifically asked you to make—you know the frustration of calling consumers who are following this advice, especially if the number the consumer provided for you to call is their wireless number.

For consumers, not receiving a call they want to receive can be equally as frustrating. This doesn't refer to unwanted calls hawking car warranties or duct cleaning services. It's about calls they have a vested interest in receiving: for example, from their doctors or pharmacies, or their children's schools or favorite charities. Consumers might wonder why these places have stopped calling them, but the answer is they haven't stopped calling—their phone company started labeling these calls as “Spam” or “Telemarketer” so consumers stopped answering them. After all, why would a consumer pick up a call flashing either of these labels?

Sadly, the telecom gods are not omniscient. They don't really know if it's a spam or telemarketer call—hence the question mark they append to their best guess. When a “Spam?” or “Telemarketer?” message is displayed, this is the phone company's way of saying they have no idea who is calling. And even though they don't know who the call is coming from, they've been told by the Federal Communication Commission (FCC) to warn consumers by categorizing the caller under one of several generic headings. These essentially boil down to a flashing sign warning you to think before you answer the call.

We'll get to what businesses and organizations can do about this, but first, here's a brief history of what lead us to this point.

Carrier Call Blocking – A Brief History

For many years phone companies have been allowed to block calls they believed “highly likely to be illegitimate.” However, until July of 2019, that mechanism was always left to the consumer to proactively choose to turn on. This choice to turn on is referred to as an “opt-in.” But in July of 2019, the FCC granted phone companies clearance to block calls proactively unless the consumer had opted-out of the call blocking program. <https://docs.fcc.gov/public/attachments/FCC-19-51A1.pdf> (An “opt-out” is when the consumer must choose to turn something off that has been automatically turned on for them.) This transition from opt-in to opt-out seems like a small thing but the impact has been far reaching. While the change was well-intentioned, it has not always turned out well in practice for those responsible for consumer engagement. If a phone number is being used by an offshore scam artist who is “leasing” a US phone number in an attempt to disguise scam calls, allowing phone companies to block or drop those calls is a positive for everyone. However, choosing to block illegitimate calls assumes that some piece of technology somewhere in the process knows how to correctly differentiate a good call from a bad call. In the current state of the system, this ability to differentiate good from bad is not yet completely developed. The FCC, in their declaration, noted this was a risk but decided to move forward anyway.

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When the FCC made the rule change, it should have better defined exactly what an undesirable call is and, more importantly, what calls would **not** meet that criteria. This had always been a problem since the phone companies have had to make these judgements for years due to opt-in call blocking. However, having now forcibly opted-in all consumers to the service, the skyrocketing counts of blocked calls is exposing how difficult it is for phone companies to differentiate between good and bad calls. To mitigate this lack of expertise at making such decisions, the major mobile carriers outsourced this decision-making responsibility to third parties. Some of these third parties also integrate crowd sourced call complaint data as well as national “good caller” registries to fine-tune their processes. The resulting design of the call blocking mechanism is that callers can be judged guilty of making an undesirable call even before they know they’re on trial. We’re in favor of pulling the plug on bad actors bent on their continual onslaught of—annoying at best and criminal at worst—phone calls. Odds are you’ve received at least one of these calls while you’ve been reading this. But the fact is that if your doctor is trying to call you and the third party hired as judge and jury decided your doctor’s phone number was making too many calls or had been complained about on a public website, you may not get the call. Equally as likely is that when your favorite charity calls you for their annual pledge drive, your phone company may never connect the call to you because someone once complained about the phone number from which your charity is making the call—even if it wasn’t the charity’s number at the time of that complaint. This may not seem fair, but regardless of fairness your charity won’t get through to you or anyone else from that phone number, at least not for a while. The same problem could exist for your pharmacy calling to remind you a prescription is ready, your local utility calling with a reminder your bill is due, or your child’s school calling to let you know the school lost power and your child is waiting to be picked up.

The third parties making these decisions for the phone companies aren’t making a personal judgment about the caller. On the contrary, it’s very impersonal. Most of them don’t know who is actually using the phone number. They only know their algorithm indicates that a particular phone number is acting—or has acted in the past—the way they believe a phone number being used for a bad purpose would

act. If the algorithm says the call is likely bad, the phone company doesn't connect the call or tags it as spam. It's not personal—it's an algorithm. It's not about who is calling; it's about the phone number they're using to make the call. It's also important to note that the reason the algorithm doesn't work very well is that the factors it uses to determine a call is bad are largely the same for both illegal robo-callers and legitimate callers. The algorithm can't measure the intent to defraud. In the end, the choice given to consumers to opt in or out, requires consumers to, as one might say, "throw the baby out with the bath water." Consumers can only choose to receive calls or block calls from certain calling scenarios that likely include both good callers and bad callers.

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If you're the person not receiving the call from the pharmacy, non-profit charity, or school, this apparent overstep of power is frustrating or even potentially dangerous. However, what if you are the pharmacy, non-profit charity, or school? If your call completion rates have dropped through the floor in the last few months, this new opt-out call-dropping policy is likely the cause. The good news is that there is something you can do to fix this, but this requires you to fill in a gap in the data used by the algorithms.

The Caller Identity Gap

In the last couple of years, a gap developed in our ability to identify ourselves to those we call. If an organization calls a landline or VoIP line, the majority of phone companies that offer this service provide a caller ID for inbound calls. Before your phone rings, the caller name is looked up by your phone company and, if one exists, is sent to your phone. However, when a call goes to a cell phone, that step doesn't happen. If you have a smartphone, the phone application you use to talk on the phone looks up the incoming number in your list of contacts and displays the contact's name. But if the call comes from a number that isn't in your phone's contact list, there's a missing piece. We call this the **Caller Identity Gap**.

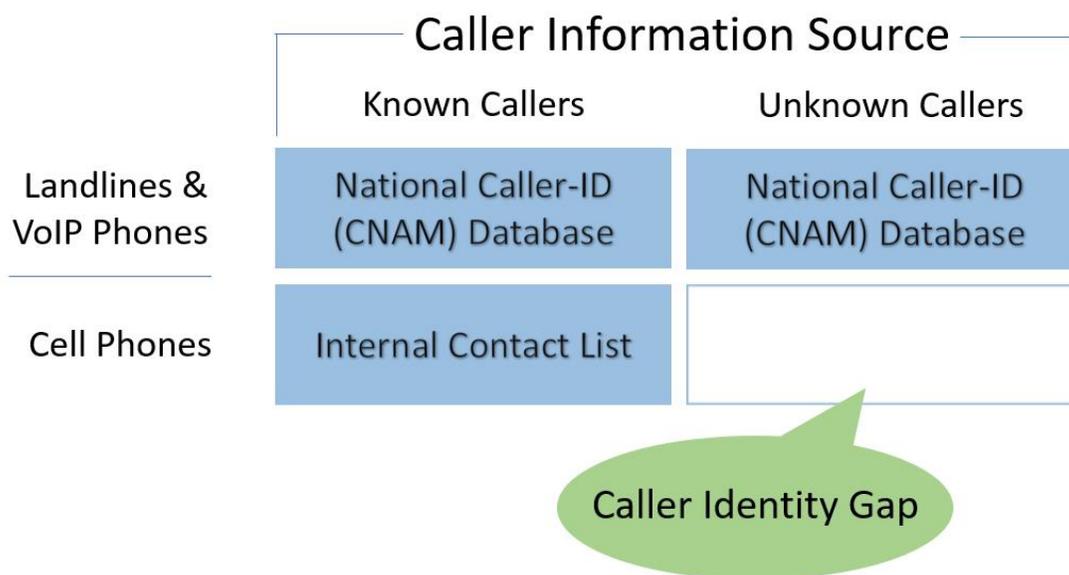


Figure 1. The Caller Identity Gap.

Prior to the FCC’s rule change, your phone company—referred to as the “**originating carrier**” when you are making a call—simply routed your call to the phone company responsible for the number you are calling—called the “**terminating carrier**.” The process has mostly remained the same except that the central decision about whether to block certain types of calls is defaulted to “yes”. How a blocked or dropped call is handled depends on the terminating carrier. Some may send the call to the called party’s voicemail. Some may connect the call but label it as “Spam Likely”, “Telemarketer” or “Fraud Risk”. Many don’t even provide a calling number to let the called party make the decision themselves, or may drop the call without alerting the called party at all. To the caller or the caller’s telephone/dialer software, these calls could generate a tri-tone message which the dialer would likely interpret as a disconnected number. They could also be flagged as RNA (“ring, no answer”), meaning the called party didn’t answer. If your disconnected or RNA rates have recently increased, you’re likely seeing the impact of this new call-blocking rule.

As shown in Diagram 1 below, there are two types of call blocking determination services: one used by the phone companies themselves (i.e., Analytics and Caller Data Providers, or ACDs) and a different set of services that run on mobile phones (i.e., On Device Call Blocking apps). To get a call to connect, callers must first run the gauntlet through the services that phone companies use to determine if a number should be blocked. Next, callers must run through the services that consumers can download to their mobile phones that provide another potential gating layer.

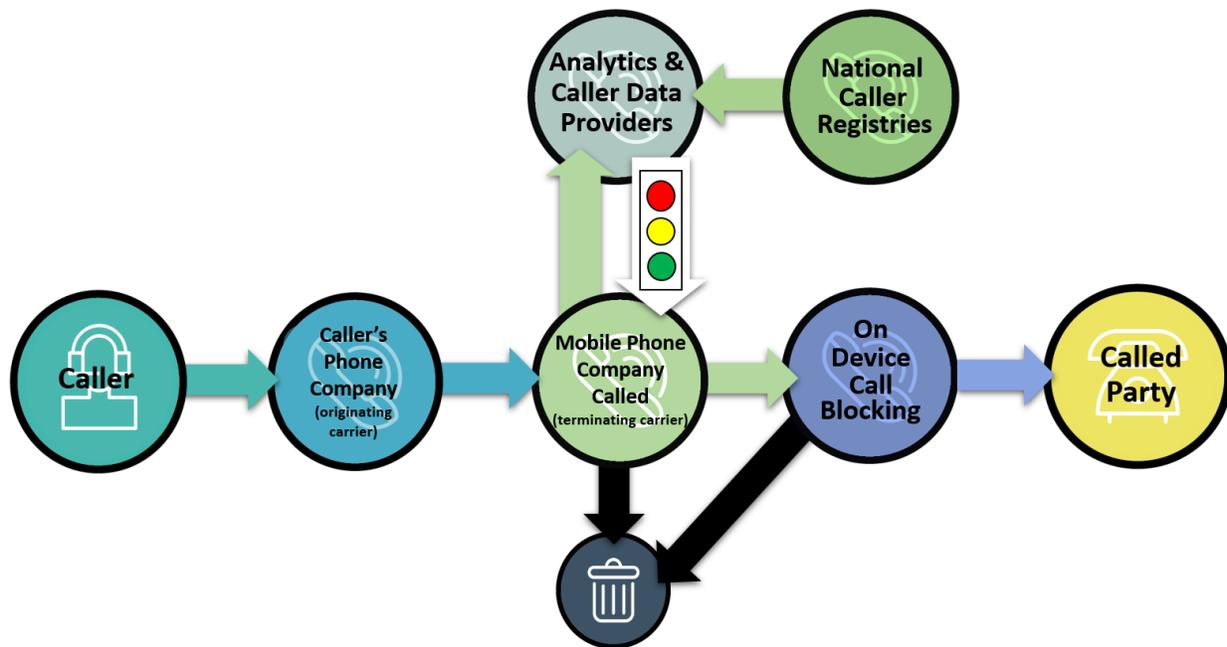


Diagram 1. The complex gauntlet through which a call must pass in order to be answered.

What can be done?

Lest you feel hopeless about this problem, there are several things you can do. The first step is to educate yourself on this problem—this article should help—and look for tools that can 1.) help fill the caller identity gap and 2.) get your caller information into the right place at the right time. Sadly, the days where every number you dialed is routed all the way to the called party every time are gone. From

now on, most callers will need to take a few extra steps that weren't previously necessary and won't always seem fair or reasonable. But this is a great example for legitimate callers where focused action can mitigate the bulk of the problem.

Here are our recommendations for a high-level response plan:

1. **Determine the extent of the problem.** If your phone appending and hygiene processes haven't changed recently but your RNA and disconnect rates have suddenly jumped up, the problem is likely not the phone numbers you're calling but the outbound numbers you are calling them from.
2. **Monitor, Monitor, Monitor.** Monitor the problem so you know if your calls aren't being completed, and if it's getting better or worse. This means finding a service that checks your outbound dialing numbers to see if and when they become "hot." A "hot" number means calls made from this number have a high chance of being blocked. There are many reasons a number can become hot, however, so don't assume a number that hasn't been used in a while is going to work when you need it. PacificEast also offers an "as you need it" call scoring service called Phone Risk Score (PRS), which checks the phone number's reputation score and determines whether a call from that number is likely to be blocked. If you lease lines from phone companies, we highly recommend you run this service on any number you plan on leasing to make sure it will be usable.
3. **Check in with your Phone Service/Dial-Tone provider.** The terminating carrier's perception of your originating carrier can be a contributing factor in their decision to block calls. You may need to consider switching originating carriers to improve the general reputation assigned to your outbound numbers. Cheap phone number vendors may cost you in the long run if the calls you make through them have a higher chance of being blocked or dropped.
4. **Get your numbers whitelisted.** Whitelisting means proactively registering your outbound dialing numbers on the national caller registries used by third-party call blocking services. The whitelisting services can act as an exception list that the call blocking services should use to allow legitimate numbers through to the called party. Ideally, you'll want to get your outbound dialing numbers on as many of those national caller registries as possible.
5. **Subscribe to Branded Calling services.** Branded Calling services help fill in the Caller Identity Gap referenced above. They let cell phone companies which don't use traditional caller ID know who is calling and, more importantly, can display your caller information on the screen of the mobile devices you call. These are premium services and the major mobile network platforms require the caller to pay when they display the caller's information on the mobile device, but the visibility provided in exchange for these charges can make the difference between a consumer picking up the phone or ignoring the call. PacificEast's BrandDelivery service relieves enterprise callers of the task of establishing contracts with all of these service providers and building multiple interfaces to them. Diagram 2 below shows how this additional service fits into the call scoring process. First, our customers send us the caller information about the phone numbers they use for outbound calling. We then standardize and distribute this information to the ACDs used by most of the major mobile networks as well as the major national caller registries. BrandDelivery replaces the "Spam?" tag seen on mobile devices with your company or organization's actual name or brand.

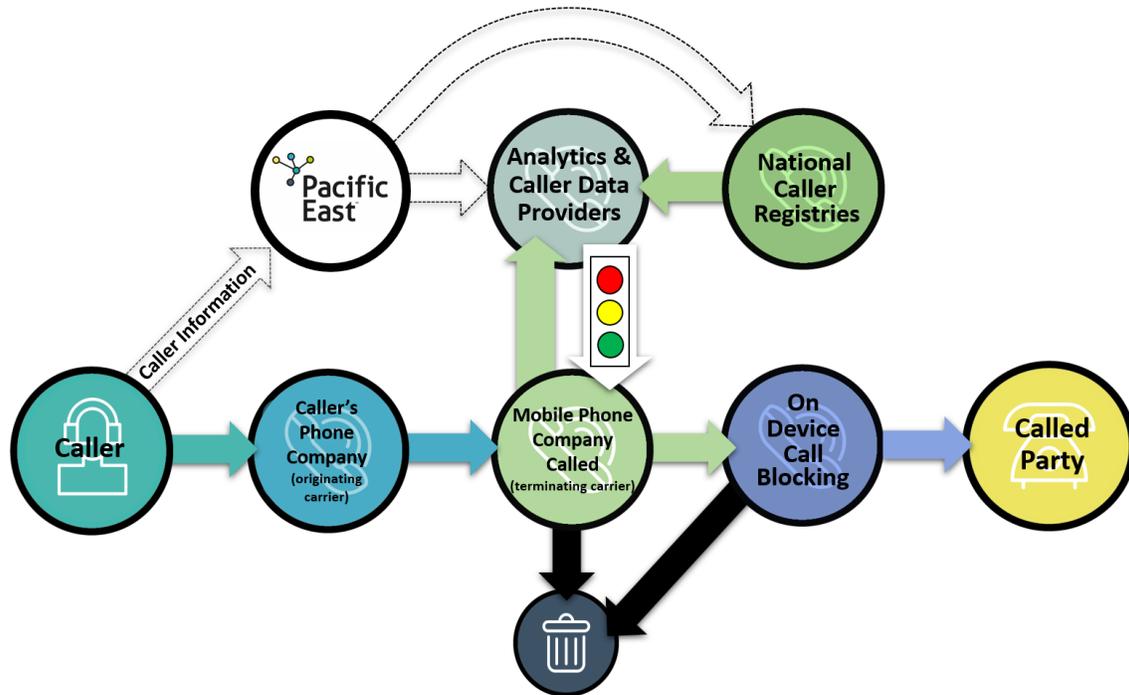


Diagram 2. How PacificEast and BrandDelivery improve caller data availability and visibility.

6. **Educate your audience.** Make sure everyone you normally call and who has expressed interest in receiving your calls in the past—whether members, patients, customers, or constituents—knows the smartphone apps they intended to use to block illegitimate calls may also be preventing legitimate calls. Consumers who use smartphone apps like Nomorobo, Robokiller and TrueCaller may not be aware that many of these services are caller-agnostic and block calls they want as well as calls they don't want. We've all become used to checking spam folders for emails you wanted to receive. Consumers now also need to check their phones' spam folders if they use call blocking apps or they'll miss calls they wanted to receive.

Finally, the FCC is collaborating with phone companies to establish a specific tri-tone signal that will tell enterprise callers that the call they're making has been blocked by the terminating carrier. This will enable legitimate callers to better detect if the numbers they're calling from are being blocked.

Conclusion

PacificEast has engaged with many of our customers in the non-profit, financial services, and healthcare sectors and heard the frustration about this problem. We join in their frustration—they are paying the price when the intended victims were supposed to be true robocallers, organizations that use illegal autodialing and pre-recorded messages to defraud or trick consumers. As is frequently the case, federal regulators are late to the game. In their rush to respond, they built rules that aren't effective in curbing bad behavior and instead often harm legitimate organizations. The good news is that resources for legitimate callers are becoming available. We believe there is light at the end of the call-blocking tunnel—and our BrandDelivery solution can help make this situation brighter.