

## How Mavenir's Revenue Protection Helped Telefonica Increase Revenue by Preventing Spam and Monetizing A2P Grey Routes

*"Mavenir made audits of all our networks to identify types of fraud; they estimated we were losing more than \$18M per year to Grey Routes in the region."*

Leonardo Hilario  
Planning and Project Manager



### ORGANIZATION SNAPSHOT

- **Company:** Telefonica Hispanoamerica
- **Location:** Latin America
- **Employees:** 30,790
- **Objective:** Identify and stop fraudulent A2P SMS messaging costing \$18M annually
- **Solution:** Mavenir Fraud and Spam Detection Solutions

### IMPACT

- 20% increase in annual messaging revenue after first three months of Mavenir solution deployment
- 9 million fraudulent messages blocked after the first day of deployment
- 20,000 users blacklisted after the first day of deployment (each sending an average of 180,000 fraudulent messages per day)
- \$3M monthly increase in revenue from interconnection fees
- 40M fraudulent messages blocked monthly

## The challenge

### Regain and Increase Revenue by Blocking Fraudulent A2P Messages

Headquartered in Bogotá, Colombia, Telefónica Hispanoamérica realized that statistically, they must be losing valuable A2P messaging revenue due to fraud, but had no idea how much, or how to stop it. MobileSquared estimates that global A2P messaging revenues will climb to \$64B annually by 2020, with Latin American mobile operators losing 53.9% of annual A2P revenue due to grey route fraud, for a total loss of \$7.2B from 2017-2020. As the second largest mobile operator in Latin America, Telefonica supports 186.4 million subscribers that send approximately 2 billion text messages monthly.

To address their A2P messaging concerns, Telefonica turned to Mavenir, not only for their industry leading Spam and Fraud Detection software, but because they needed a trusted solution provider to partner with. They asked Mavenir to analyze their networks, and make strategic fraud prevention decisions without compromising the quality of their overall messaging services.

Mavenir audited Telefonica's Latin American networks to identify messaging revenue leakage. Telefonica was quite surprised by Mavenir's findings: In one country, 70% of the messaging traffic was generated by only .02% of their subscriber base, and these messages were sent to a massive amount of destinations. In contrast, 99% of the subscribers sent fewer than 150 messages to no more than 50 different users per month. The other regions demonstrated similar messaging patterns.

In the final analysis, Mavenir estimated that Telefonica was losing \$18M annually due to fraudulent A2P messaging. It was obvious that spammers were sending A2P messages disguised as P2P messages (grey routes), and probably using SIM farms to generate millions of illegal messages across the network.

*"By investing in machine learning, artificial intelligence, we raised the industry performance benchmark for grey-route and SIM-box message detection by an order of magnitude, placing Mavenir well ahead of the competition."*

Ilia Abramov  
Director of Security Solutions  
Mavenir

## The solution

### Spam and Fraud Detection that Dynamically Adjusts to Changing Threats

Telefonica chose Mavenir's Spam and Fraud Detection Solution because its filtering and detection capabilities are far ahead of the competition. The solution utilizes specialized machine learning techniques that are capable of automatically detecting and selectively blocking sophisticated grey-route and SIM-box messaging. Mavenir's technology can detect up to eight times more spam-related messages than traditional filtering techniques available on the market, including spam received via IP/OTT messaging services.

Spammers constantly adjust their delivery techniques to beat detection. They utilize SIM farms, which simulate a large quantity of subscribers, and instead of sending massive amounts of messages at once, they'll send out bursts of messages, or will interleave various campaigns throughout the day. Identifying and blacklisting spammers can be like finding the proverbial needle in a haystack, except in these cases, the needle keeps moving to avoid detection.

To combat dynamic spam threats, Mavenir's Spam and Fraud Detection technology utilizes sophisticated machine learning algorithms that correlate multiple dimensions of messaging and mobile network properties, while continually monitoring subscriber behavior.

The technology's learning process continually adjusts to the constantly changing threat posed by spam to subscribers and to the operator's brand and reputation. It results in an ever-improving and effective solution that evolves in real time, as do the characteristics of spam, modifying spam and policy control as appropriate.

Iliia Abramov, Director of Security Solutions for Mavenir, explains why the solution is so effective: "By investing in machine learning artificial intelligence, we raised the industry performance benchmark for grey-route and SIM-box message detection by an order of magnitude, placing Mavenir well ahead of the competition. Our customers now have the most effective solutions to address application to person message fraud."

## The results

### Major Reduction in Fraudulent Messages; Increased Revenues

Telefonica was confident the Mavenir solution would be successful, but never envisioned the type of results seen from the very first day of deployment. With Mavenir's spam filtering in place, nine million fraudulent messages were blocked, with 20,000 users blacklisted, each averaging 180,000 fraudulent messages per day.

Fraudulent message statistics varied for the first couple of weeks, with reports showing an average of 5-10% of total subscriber messages blocked. It was obvious that the spammers were attempting new techniques to beat the fraud detection, but Mavenir's solution intelligence continually detected and curtailed a majority of the spam. Blocked fraudulent messages stabilized at approximately 2%, totaling 40 million messages per month.

One windfall benefit Telefonica never anticipated relates to their monthly interconnection fees – the money they pay to or receive from other carriers for terminating messages. Before deploying the Mavenir solution, they experienced regular monthly interconnection fee deficits, yet after the first month of deployment, they showed a profit of \$US3M.

Only three months after deploying Mavenir's Fraud and Spam Prevention Solution, Telefonica determined that they will now see a 20% annual increase in A2P messaging revenue. Based on this success, they have decided to move forward with implementing Mavenir's advanced spam filters in several countries, and expect to raise their blocked message totals from 2% to 5%, while continuing to see an increase in revenues from both A2P messaging and interconnection fees.

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