

CASE STUDY

Turning Grey to Gold – African Operator

A Grey Route is network traffic that is in violation of the operator's terms and conditions regarding commercial messaging. It is SMS traffic that enters mobile networks through unauthorised channels, transmitting alerts, notifications and marketing messages.

All around the world, mobile operators are losing revenue through unauthorised grey routes. Despite increasingly generous consumer packages for high volume messages, Person-to-Person (P2P) SMS is steadily falling. While reducing at great speeds, major brands – e.g. banks and social networking sites – continue to have their commercial messages funnelled through grey route P2P channels, even though they are predominately sending Application-to-Person (A2P) messages.

In 2012, one of the largest operators in Africa approached AdaptiveMobile (AMS) seeking assistance in dealing with this unauthorised traffic. Based on the strength of an existing relationship, AdaptiveMobile and the African Operator worked quickly together to determine a solution. After deploying AdaptiveMobile's Messaging Security Solution they were able to identify and shut down three main classes of grey route traffic (identified below) and realise in excess of 3.7 Million USD in revenue each month.

Overview

Situation: One of the largest mobile operators in Africa was experiencing frequent revenue loss due to SMS advertising and business process traffic entering their networks through unauthorised grey routes.

Solution: AdaptiveMobile's Grey Route Controls (in combination with AdaptiveMobile's Messaging Security Solution)

Success:

1. Identification and prevention of three main classes of grey route traffic.
2. Realised over 3.7 Million USD in revenue each month.
3. Network Protection for subscriber and operator brand image safeguard (decrease in amount of customer complaints and billable time handling concerns).

Impact: Massive reduction of grey route traffic. Reduction in interconnect fees. Enabled new business opportunities / revenue streams for customer.

The Situation

As the network grows, unauthorised grey routes become more difficult to track. Despite generous wholesale packages for high volume senders, today's mobile operators are frequently losing potential income due to SMS marketing and business process messages entering their networks. Enterprises are communicating more with their customers via SMS and with the increase of A2P traffic, the profitability of messaging is increasingly under threat.

In addition, major brands are working with third party vendors to send notifications and marketing communications to their customers. Believing the messages are sent via A2P streams, the vendors are re-routing these messages through inexpensive grey routes and retaining the profit.

Areas of Concern

1. **In-Bound Marketing Messages:** Marketing messages sent from one corporation to many subscribers at no additional interconnectivity cost. Traditionally, these are legitimate messages from valid organisations – such as customer notifications from delivery companies, utility companies, financial services, or retail brands. They are often requested by the customer and not spam.
2. **Competitor Messaging:** Type of message specifically sent from a competitive network to roamers or subscribers on the operator network to try to entice them to switch to a different network – along with their valuable roaming revenue.
3. **Access Codes:** Messaging that comes from companies (such as banks or social networking sites) that use SMS to send access codes and notifications about a specific account. These are not spam as often the receiver has requested this method of communication and it's used as a security feature for any service that requires 2-factor authentication.

The Choice: AdaptiveMobile

When AdaptiveMobile's Grey Route Controls are implemented, the Network is closely monitored by the Threat Intelligence Unit, and the receiving operator gets maximum revenue through direct sales to enterprises and brands. The enterprises and brands may be still paying the same price per message, however grey routes are significantly reduced and the operator can ensure the original message is successfully distributed to its intended end-audience. Once AdaptiveMobile's Grey Route Controls are deployed, most messages sent through grey routes will be blocked; therefore it is in the best interest of the sending company to set up a direct relationship with the operator.

Given AdaptiveMobile's strong presence around the world and the Company's unique data intelligence capabilities, the Grey Routes Controls (in combination with AdaptiveMobile's Messaging Security Solution) was the ideal choice to resolve the challenges faced by the African operator. AdaptiveMobile is the only company providing a product that enables multiple business models to manage grey routes. The managed service is deployed through a sophisticated high precision platform, allowing only illegitimate traffic to be

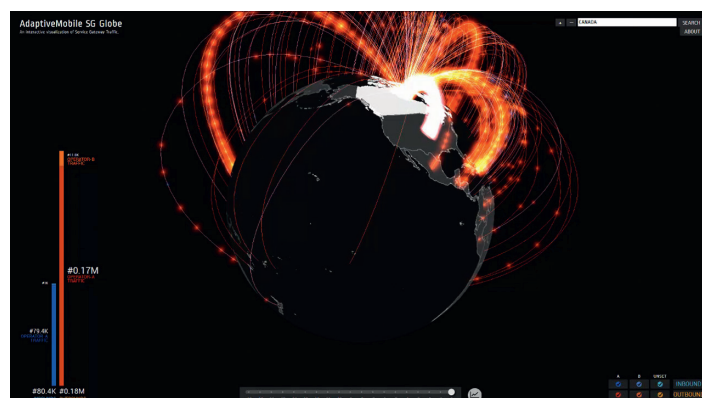


Fig 1: AdaptiveMobile's Mobile Network Protection Platform

blocked, even when coming from rapidly changing sources or compromised legitimate sources. This means that regardless of where the grey route moves to, the operator is always protected and they are able to select appropriate hybrid business models – protecting business relationships with key brands.

AdaptiveMobile Grey Route Management Approach

1. Market Lock-Out: Controlling all inbound traffic to block Commercial and A2P traffic from unprofitable sources, steering it through available open routes that provide better revenues.
2. Legitimate Route Pollution Cleansing: Selectively blocking messages from certain brands, services, and applications, while allowing P2P to continue to flow on the same route.
3. Premium Brand Pick Off & Long Tail Control: Enabling operators to focus on premium or high cost brands first, while still controlling the remainder of other grey route traffic.

AdaptiveMobile's extensive experience in addressing cross-bearer threats was another reason for selection by the operator – currently filtering traffic for over 1.3 billion subscribers worldwide. This wide footprint meant that AdaptiveMobile could utilize their worldwide threat database on all bearers (not just SMS and MMS) and apply it within the network to handle current and future threats for the operator.

The Results

The deployment of AdaptiveMobile's Grey Routes Controls (in conjunction with AdaptiveMobile's Messaging Security Solution) resulted in significant improvements for the operator and its subscribers. Because of the success seen in this region, the operating company extended the controls to cover all SMS generated within the network, and entering the network from other networks.

1. Identification and prevention of three main classes of grey route traffic.
2. Realised over 3.7 Million USD in revenue each month.
3. Network Protection for subscriber and operator brand image safeguard (decrease in amount of customer complaints and billable time handling concerns).
4. Identification of new revenue stream in a vertical market for Bulk SMS over signalling. Launch of service with high-profile partners.
5. Identification and blocking of messaging traffic from competitors targeting roaming and high ARPU customers, providing a sizeable increase in data and revenue traffic from roaming users.

Aside from the financial benefits, there is a very strong sense of partnership between the African operator and AdaptiveMobile, complementing their technical expertise. Because of AdaptiveMobile's unique and proven solution, a system has been put in place to address all ongoing and future threats to the operator and to its subscribers, thus protecting its most important asset – the subscribers

About Enea AdaptiveMobile Security

Enea AdaptiveMobile Security is a world leader in mobile network security, everyday protecting over 80 Mobile Operators and billions of mobile subscribers and devices globally from fraudsters, criminals and nation states. We have the strongest 5G core network security team, who are designing, planning and building the very best in 5G core network security solutions focussing on threat-intelligence, security heritage and protocol correlation.

Enea AdaptiveMobile Security brings a unique security perspective on real-time mobile network traffic. The global insight provided by our 5G, Signalling and Messaging thought leaders, security specialist teams and Threat Intelligence Unit, combined with our signalling and network protection software that sits at the heart of the network, ensures Enea AdaptiveMobile Security remains at the forefront of the latest advancements in mobile networks and their security, and continues to be the trusted partner of many of the world's largest Mobile Operators.

For more information on how Enea AdaptiveMobile Security can help you protect your communications infrastructure, subscribers and revenues, please contact sales@adaptivemobile.com.

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HEAD OFFICE

Ferry House, 48-52 Lower Mount St, Dublin 2.
Contact: sales@adaptivemobile.com

www.adaptivemobile.com

REGIONAL SALES CONTACT NUMBERS

US, Canada, Latin America Sales: +1 972 377 0014
UK Sales: +44 207 049 0421
Middle East Sales: +97144 33 75 83
Africa Sales: +27 87 5502315
Asia Sales: +65 31 58 12 83
European Sales: +353 1 524 9000

REGIONAL OPERATIONAL SUPPORT CONTACT NUMBERS

UK: +44 208 584 0041
Ireland: +353 1 514 3945
India: 000-800-100-7129
US, Canada: +1 877 267 0444
LATAM: +525584211344