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# Grey is the new green: cashing in on the A2P opportunity



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## INTRODUCTION

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The competitive landscape of the telecommunications industry means operators aren't able to turn a blind eye to any revenue medium today. The long-fabled death of SMS as a primary revenue stream has yet to fully materialise, as the decline of the messaging medium as a revenue source has failed to accelerate as initially expected.

Operators the world over should still see significant monetary value in SMS; unfortunately, however, not all do, which in itself is a part of the problem. A lack of action in monetising the SMS opportunity results from a distinct lack of awareness in some quarters, as operators strive to find the latest and greatest. The potential that remains for SMS, however, is being undermined by illegitimate SMS delivery aggregators that exploit unregulated or unprotected markets to terminate SMS delivery, while avoiding payment of necessary operator fees. As a consequence, operators are missing out on a significant amount of revenue due to revenue leaks from messaging being terminated over these "grey routes".



♥♥ A2P is entering a golden age; a four year window where feature phones still outnumber smart-phones on a global scale ♥♥

### A golden age

It has long been acknowledged that traditional operator revenue streams are under threat. Today's industry is rapidly moving towards an all-IP mobile experience for increasingly demanding and selective users. Simultaneously, free-to-play communication providers are delivering services over the top of the service provider network, and luring customers away from traditional SMS services, except in Japan where the inverse is happening.

Services running over what we now consider to be legacy networks, such as 2G and 3G, are slowly being re-routed and integrated into today's IP network, i.e. LTE. Traditional messaging channels will eventually be phased out and all-IP messaging will arise, but it could already be too late for operators when users already prefer to use digital channels for messaging. As the penetration of smartphones around the world continues to increase, this trend is likely to continue.

SMS has also found difficulties in recent years due to its relatively inflexible and stagnant nature. The value proposition of SMS

for customers has scarcely changed since its introduction as a communications medium in the 1990s. While SMS had its day during the feature phone boom in the early 2000s; in recent years OTT messaging platforms, such as Facebook Messenger or Whatsapp, have given customers increased functionality and the ability to send and receive messages from multiple platforms.

To highlight the decline in SMS usage, Figure 1 is a visualisation of data gathered from Ovum's World Cellular Information Service. In June 2013, global SMS traffic sat at 2.36 trillion messages, and proceeded to decline to 2.18 trillion over the course of the following six quarters up to December 2014. This represents a decline of roughly 178 million messages, or 7.5%.

However, all of this is on the assumption that SMS messaging channels are only relevant from a person to person (P2P) perspective. In fact, application to person messaging (A2P) has been on the rise for the past few years, as both enterprise organisations and service providers turn to A2P messaging as a means of enhancing and maximising customer engagement and experience.

In fact, Ovum Research has recently published figures which indicate that A2P messaging is entering a golden age; a four year window where feature phones still outnumber smartphones on a global scale, therefore highlighting the SMS opportunity for customer engagement and marketing opportunities. This opportunity exists because of the ubiquitous nature of SMS, which is ideally positioned to transcend the gap between feature phones and smartphones which utilise OTT communications applications.

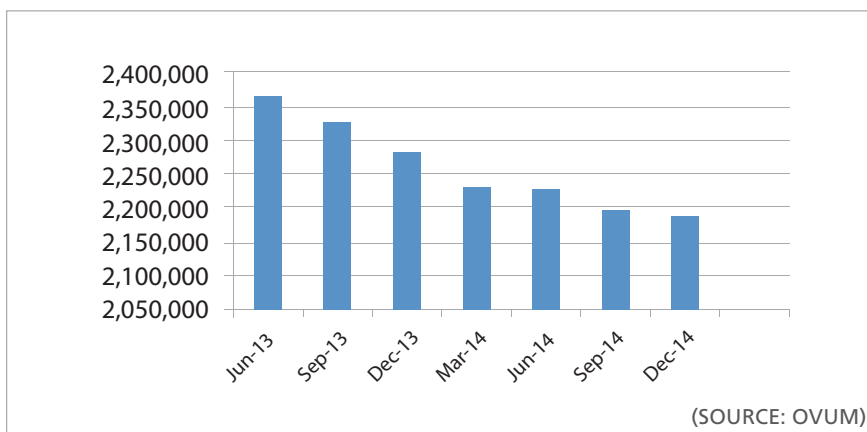


FIGURE 1: GLOBAL SMS TRAFFIC 2013-2014 (IN MILLIONS)



According to Ovum, as seen in Figure 2, A2P SMS traffic has roughly doubled in the past four years, and will continue to grow up until the end of 2017, when it is predicted that the number of smartphones in the world will surpass the number of feature phones. At this point, from 2018 onwards, it is likely that the majority of messaging will be conducted through IP channels. Thanks to social media and OTT messaging options, a significant proportion of instant messaging, SMS included, is done over the internet, and that will continue to grow as traditional SMS traffic moves in the opposite direction.

With A2P messaging services likely to still have another two or three years of significant growth left, Ovum forecasts at least another 10%, operators are looking to maximise monetisation opportunities associated with the burgeoning revenue stream. Considering the rising threat of OTT players providing digital services, operators need to consider SMS revenue assurance across the entire network, while monetising A2P as well. Despite the many legitimate and positive utilisations of A2P which exist today, such as notifications from banks, delivery alerts from logistics companies, appointment reminders from the healthcare sector etc, there remains a fear within the OTT community that wholesale messaging in the same vein as A2P will result in increased unsolicited messages due to insufficient protection from SMS spam campaigns. Subsequent to increased spam is significant damage to brand reputation equity, primarily to the operator, and secondly to the application or service being utilised. The hesitancy from OTT players to embrace A2P is understandable, and probably appreciated by the better-equipped operator community.

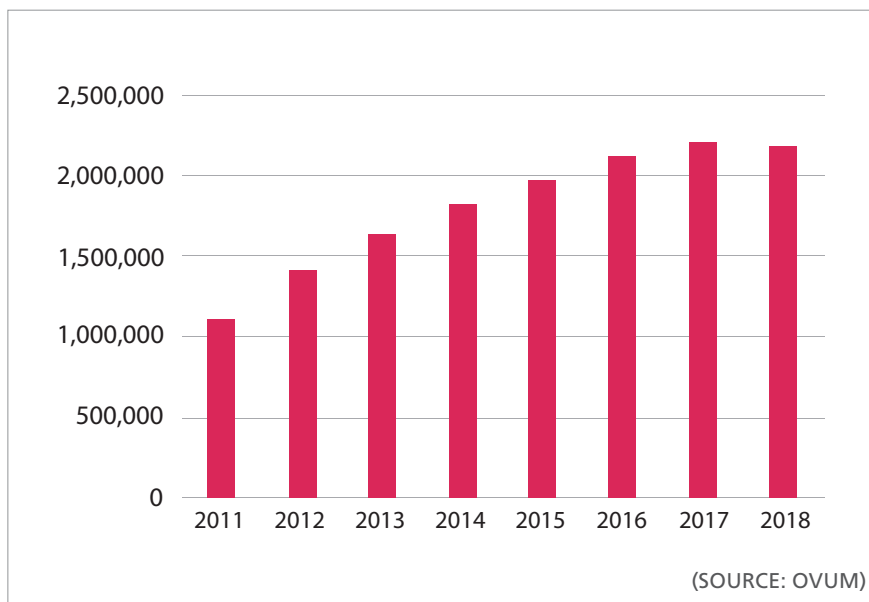


FIGURE 2: GLOBAL A2P FORECAST 2011-2018

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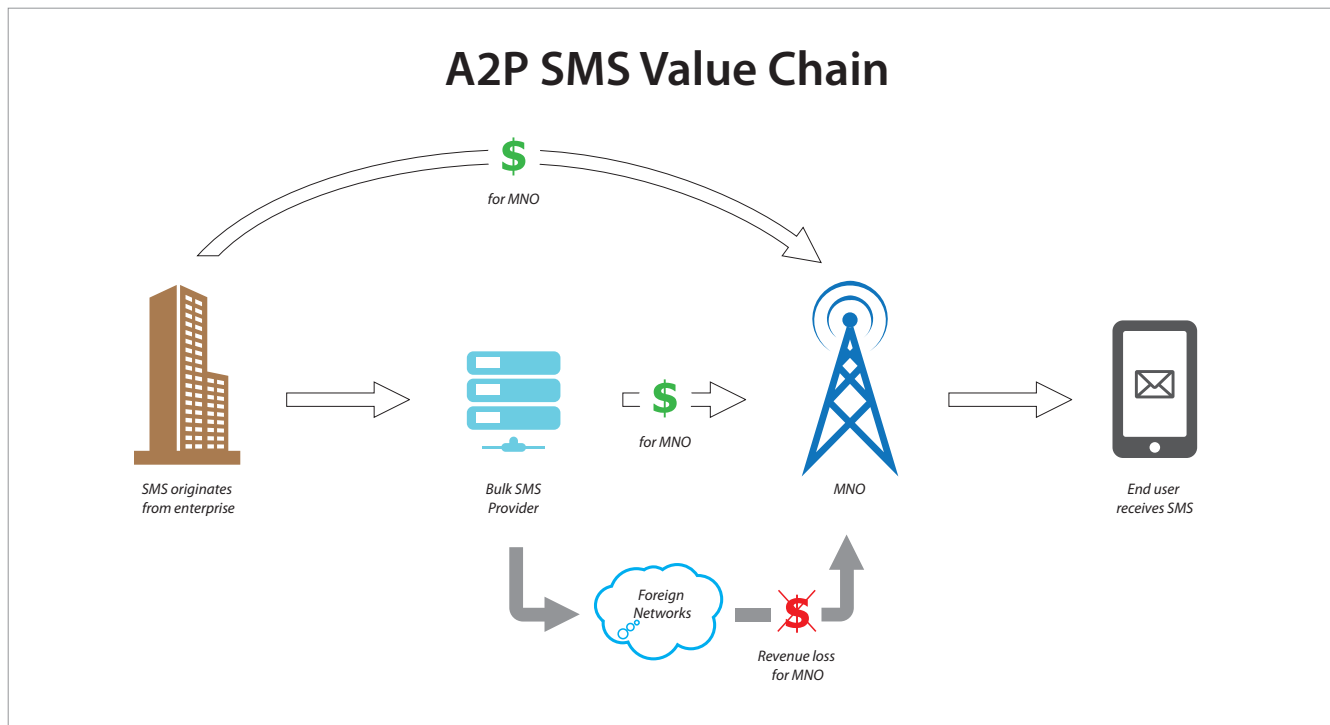
#### Grey area

When SMS traffic is being sent, either locally or internationally, it is carried through channels across the network(s) which are referred to as routes. The vastness of the network, particularly when considering international interconnects, exposes itself to what is referred to as grey routing.

The vast majority of traffic conforms to the laws and standards of both the point of origin and the destination, while also working within a contractual roaming agreement between both carriers of the message. When an SMS is sent in this context it is deemed a 'white route' and revenue is assured for all parties concerned.

The opposite of this is consequently termed a 'black route', in which neither party involved in the sending and receiving of the SMS is authorised by the regulatory authorities concerned and there is no contract between them, in other words





both parties are acting illegally. Among the incentives for operating a black route are cost savings over legitimate players and the ability to circumvent data privacy and any other regulations.

Of the greatest revenue assurance concern to operators, however, are 'grey routes', in which one end of the SMS route is legal but the other is at the very least ambiguous in its legality, and can result in the legitimate operator, usually the receiver, losing out. One of the primary concerns relating to grey routes, aside from the regulatory and legality issues, relates to revenue leakage. Because the sender delivering an SMS is circumventing regulatory policy and official delivery channels, appropriate charges and fees involved with the transmission of a message can be dodged. In the context of A2P, this will often result in unauthorised SMS

aggregators exploiting black or grey routes for delivering bulk SMS.

Since A2P messaging is an automated process, there are different players involved than in a traditional P2P text message. An A2P SMS will originate from an enterprise, for example as part of a two-factor authentication process. It will typically pass through a bulk SMS provider that specialises in finding the cheapest possible route for the message, which could include grey routes. This is the point in the process where potential revenue loss for operators can occur.

An Ernst & Young report published last year revealed that 30% of global operators estimate that revenue leakage is more than 1% of total revenues, which accounts for roughly \$15 billion per year. The report was based on interviews with 58 major global

telcos, evenly split across Europe, Africa, Middle East, Asia, Oceania and the Americas.

Emerging markets are traditionally more exposed to revenue leakage, due to less stringent regulatory pressures in favour of increasing opportunities for quickly bringing services to market. 10% of respondents from Africa, for example, are cited by the report as struggling with leakage representing more than 5% of total revenue. Nearly 70% of European operators meanwhile stated less than 0.5%, with only a small minority stating more than 2%.

Most alarmingly, perhaps, is that the report cites an average of 10% of global operators do not have the means to assess revenue leakage, which suggests that the implicit lack of revenue assurance capabilities remains a pervasive issue for the telecommunications industry.



The risk, according to revenue assurance specialist HAUD Systems, is that once a network operator is cracked for free SMS termination, the price in the market to terminate on such operator begins to drop rapidly, and the operator is therefore susceptible to further grey-routing and more revenue loss. HAUD reckons in excess of 10% of all SMS traffic is being grey-routed and a clear estimate for each operator is possible through traffic analysis and profiling which HAUD has conducted for various companies in order to support them in building the business case around this matter.

Signalling carriers, the interconnecting operators who deliver international SMS, claim to have filtering for fraudulent SMS delivery. However the filtering only usually occurs at an international level and what often happens in practice, says HAUD, is that SMS aggregators at a local level find alternative means of accessing local interconnect and send fraudulent traffic into the receiving operator regardless, using other entry points through other local operators or SMPP connectivity within the same country. In fact, HAUD Systems recommends that operators should consider looking beyond international traffic filtering, if they truly want to plug all the holes, and include filtering for local interconnect when assessing revenue assurance options.

### Assure thing

So what can operators do to prevent revenue loss associated with grey routing?

There is an evident need to prevent grey routing and protect revenues. Emerging markets are traditionally those with the highest percentage of revenue leakage as a result of the practice, and it is these markets

which also see the highest number of feature phone usage and reliance on SMS. These two factors combined means operators in, for example, Africa or Latin America are missing out on millions, if not billions, of dollars in revenue.

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For operators in emerging territories there are a few considerations which are likely to factor into the decision making process when it comes to tackling grey route-attributed revenue leakage. Operators are traditionally hesitant to introduce more new systems into an OSS/BSS stack; primarily because they find it daunting to manage yet another system specifically designed to control and protect the network from fraudulent traffic.

In this case; managed services, whereby an entire solution suite is provided from a third party provider under strict service level agreements ensuring quality of service, have the potential to provide operators with several advantages.

Primarily, there's the ease of setup. Operators embracing a managed service for revenue assurance are able to benefit from the full service and personnel expertise from day one, with little to no learning curve on how to manage and use new systems. By adhering to strict SLAs, operators know there's little they need to do in-house to ensure the revenue assurance service is being appropriately implemented quickly. And with that outsourced expertise comes peace of mind.

Operators would be forgiven, however, for questioning the dedication of an outsourced team for ensuring high QoS, despite the implementation of SLAs which cover the bare minimum. Despite this, revenue-share agreements between operators and vendors has become quite the trend in recent years. The reason for this is that the revenue share model is potentially of huge advantage for operators because the managed service provider has a vested interest in ensuring that revenue potential is maximised, and that grey routes are appropriately identified and controlled, as soon as possible. As a consequence, the managed service provider, such as HAUD, gets paid based on the contribution with its system and managed service expertise.

Finally, the revenue assurance service for grey route prevention essentially means the operator has acquired an extension to its revenue assurance team. The operator has, in principle, acquired a team of experts specialising in preventing revenue loss and fraudulent SMS delivery. Without having yet another system burdening the internal resources, operators have gained an extended team of experts there with the specific purpose of guaranteeing maximum success.



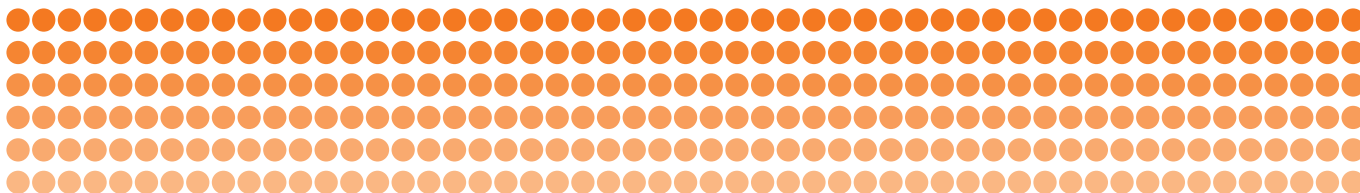
## CONCLUSION

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While emerging markets move from feature phones to smartphones, and as LTE network penetration continues, SMS will continue to be an important revenue stream for the global operator community in the coming years. Ovum's World Cellular Information Service says that SMS data revenue accounts for roughly 45% of UK operators' total data revenue, a statistic suggesting there's still a lot of monetisation opportunity for operators left in SMS.

A2P messaging is certainly a product on the rise, and will continue to be until at least 2018. Operators however, particularly those in emerging markets, will need to embrace revenue assurance products to ensure fraudulent revenue loss or leakage doesn't occur in under-regulated territories. Grey route messaging fraud continues to cause significant losses to operators the world over, revenues which can in part be assured by SMS firewall vendors, particularly if also providing managed services which are able to lend expertise and quality of service to the operator.





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### ABOUT HAUD SYSTEMS

HAUD Systems focuses on securing communication pathways for mobile network operators, mobile virtual network operators and mobile virtual network enablers. Its expertise is threefold and centres on fraud detection, revenue assurance and spam filtering.

By applying HAUD's proprietary systems, which have been developed and are maintained by our in-house development specialists, mobile network operators will have the tools to stop leakages, increase revenues from telecommunications traffic and enhance network security.

Headquartered in Malta and with an office in Singapore, HAUD offers free system trials as well as capex free pricing models.

Visit [www.haud.com](http://www.haud.com) for further information.