**SMS Abuse: Fraud, Spam and Revenue Leakages**

*- A perspective for Africa*

October 2012

# HAUD Systems - White Paper

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## The power of SMS

SMS is and will continue to be the most effective means of communication for years to come. The reasons for this are many, but the ones that are considered most prominent are two: it is the most ubiquitous means of communication and by far the cheapest.

SMS does not require sophisticated smartphones, data connections, 3G or LTE but works on anything from an underlying GSM network to more advanced and sophisticated technologies. Moreover, it works on any phone and today it is considered as a basic tool used by all subscribers globally.

Not only is it a tool for subscribers, but in recent years it has come to be one of the most effective marketing tools and communications media used by companies to reach out to their customer base as well as attract new clientele.

Recent articles demonstrate that Africa is the second largest mobile market in the world, second only to Asia. Moreover it is deemed to be the fastest growing mobile market. Hence the potential for marketers and business to tap into this region is huge. In the past five years the growth of mobile phone users in Africa was a healthy 20% year on year. With 649 million mobile subscribers at the end of 2011, this figure is expected to increase to 735 million by the end of this year.

The power of SMS in Africa is emphasised by initiatives such as Google announcing on July 18th 2012, their offering of a Gmail SMS service in Nigeria, Kenya and Ghana. This service does not require any top-end smartphone to run, but gives the same functionality as email over SMS on any basic cell phone. Gmail SMS automatically forwards the emails as SMS text messages to the phone and one can reply directly to the SMS. Additionally, one can compose a new email as an SMS and send to any email address recipient who will find the message in the right email conversation thread.

The reason why Google took this initiative is simple and two-fold, as we see it. Firstly, it has gone after those markets having a healthy growth in penetration rate of mobile subscribers and secondly it wants to find a way to attract these customers early on and circumvent the low access to broadband availability in the region to date. The table below illustrates some facts and figures about these findings.

| Country | Population (million) as at end 2011 | Total Connections (million as at Q2 2012) | Mobile Penetration |
|---------|-------------------------------------|-------------------------------------------|--------------------|
| Kenya | 41.61 | 29.7 | 30.29% |
| Nigeria | 162.5 | 101.6 | 24.80% |
| Ghana | 24.97 | 23 | 44.62% |

*Data: The World Bank, GSMA Infocentre – Wireless Intelligence.*

## The versatility of SMS

Over the past few years we have seen many legitimate ways in which SMS has contributed to improving and bridging the communication gap in Africa, creating more reach between small businesses and their clientele.

A recent such initiative comes from FrontlineSMS. On the 27th August 2012, *balancingact-africa.com* featured an article about FrontlineSMS which describes the manner in which this organisation enables instantaneous two-way communication on a large scale between broadcasters and their listeners and viewers.

In February 2012, on *zeenews.com* another use for text messages was reported in the form of malaria control for Africa. Colleagues from the Kenya Medical Research Institute and Wellcome Trust Research Program in Nairobi, Kenya described six areas where text messaging could improve the delivery of health services and health outcomes in malaria in Africa.

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The growth potential of SMS in Africa can be summed up from an interview with Caroline Anstey, Managing Director at the World Bank in February 2012, where she was quoted stating that,

> 'the penetration of mobile phones in Africa means SMS messaging systems can begin to collect citizen feedback: "The textbooks didn't arrive," "The children aren't being immunized," "The road is crumbling from poor construction and corruption." '

All this is testimony to the incalculable impending use of SMS in the African continent for beneficial purposes.

## Abuse of text messages

Unfortunately, not everyone has legitimate or noble intentions in using this medium. As with every other means of communication, where there is use, there generally is also some kind of abuse. SMS is certainly no exception to this. The growth and success of this means of communication has also attracted spammers, fraudsters and illegitimate users, resulting in revenue leakages, disputes and customer disgruntlement for mobile network operators. It also constitutes increase in resources required to mitigate these abuses and contain them to the extent possible.

Moreover, it also results in customer complaints on the other hand which generally result in calls to the call centre or billing disputes, when the customers are subjected to hoaxes, scams and spam. Not to mention that spam over text messages can lead to unnecessary load on the mobile operator's network, possibly resulting in a disruption of services. The upshot of all of this is the reputational damage to the operator's brand and risk of customer churn in the process.

In an article by Dr. Pieter Streicher on 1st May 2012, in *mybroadband.co.za*, he expressly speaks about the issue of misuse of SMS and the fight to maintain the integrity of SMS. He goes on to mention that there are two ways to curtail misuse; namely raising prices and regulation. Whilst we at HAUD Systems agree that the decrease in prices may have exacerbated the attractiveness of SMS for spammers, and we also agree that regulation (and self-regulation is important), we also believe that there is a third and more effective way of combatting SMS misuse.

The way we look at it is that for very little operational cost and no capital expenditure outlay by mobile network operators, we at HAUD Systems can provide an active solution to effectively mitigate this problem. Not only is our system a proactive way of curtailing abuse, it also serves to cut down operational costs for operators in their fraud, revenue assurance and wholesale departments, whilst increasing customer satisfaction.

An interesting article posted on *huffingtonpost.co.uk* on 28th May 2012 highlights some staggering figures. It states that over 95 million spam text messages are processed per day in Europe and America, with 45 million of those being in Europe alone. It goes on to state that 92% of these are deemed to be related to fraud. Hence, given the growth currently experience in the African continent, if one had to carry out the same study here, similar if not more overwhelming statistics would be reported.

On the 28th August 2012, Nigeria's *technologytimesng.com* reported that the Telecommunications Subscribers (NATCOMS) had urged the Nigerian Communications Commission (NCC) to address emerging menace of a hoax SMS being circulated, warning people against alleged health risk of using their mobile phones and cosmic rays from planet Mars, amongst others.

These snippets are but mere indicators to show that the issue of abusive messages is significant and its implications numerous, from infringing data privacy, to defrauding customers, to revenue leakages for operators; and the list goes on.

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## Curbing the abuse

At HAUD Systems we believe that we have developed the right suite of software solutions to curb, control and pre-empt abusive use of text messages by fraudsters and spammers on your network. We know that these dubious individuals and organisations are constantly seeking ways of circumventing regulation, payment for SMS delivery and trying to make quick money at customers' and operators' expense in the process.

For all these reasons, HAUD Systems has created a multi-layered protection system for MNOs through its scalable solution. HAUD Systems seeks to partner with MNOs and provide a comprehensive solution. The solution is based on various aspects from the offering of consultancy services to the MNO regarding the interpretation of the data on its solution, which originators to block and how to ensure revenues are generated from all types of SMS entering the network.

Through providing a non-intrusive software solution which is flexible and upgradable instantaneously with new features HAUD offers the MNO peace of mind through the configuration of alarms that the system pushes directly via email to the authorised personnel of the MNO.

This solution need not necessarily be installed on the MNO's network itself, but can also be placed at SCCP carrier level for maximum protection and least invasive installation possible.

Finally, the most attractive feature of our offering is our commercial proposition to MNOs that effectively means zero capital outlay and minimum operational costs to run.

## About HAUD Systems

HAUD Systems is a subsidiary company of FORTYYTWO Group. At HAUD Systems we have developed a proprietary solution that focuses on advanced software and technological solutions in the SS7 arena.

Our primary customers are mobile network operators and SCCP carriers that require SMS analytics for originating and/or terminating SMS on their networks.

At HAUD Systems, we pride ourselves on our company values in creating solutions, which provide reliable ease of use and control over communications networks.

Our business practice is to partner with our clients and assist them in achieving results through using our solutions. For this reason we like to hand-hold our clients throughout the business life-cycle, from initial discussions through to prompt and efficient customer support and maintenance.

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