

REVENUE-AS-A-SERVICE

How A2P SMS can deliver your Revenue-as-a-Service



HAUD
STAY IN CONTROL

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Summary

Mobile network operators (MNOs) are faced with commoditising core revenues and they're under pressure to find new sources of revenue to replace income from traditional voice, SMS and data services. At the same time, they face continued requirements to invest heavily in network technologies as they move to 4G and 5G networks and as users' demands for greater bandwidth, driven largely by video consumption, continue to grow.

What's needed is a fast, low cost opportunity for MNOs to gain more revenue. One effective way of doing this would be to access new revenues through a managed service approach that can be termed Revenue-as-a-Service (RaaS).

A2P (application-to-person) messaging is currently under-exploited by MNOs but is now expected to grow for many years to come. A2P messaging provides a great opportunity for MNOs to take a managed services approach, in effect outsourcing this part of their business with no upfront capex requirements and receiving Revenue-as-a-Service from their provider in return.



Introduction

MNO revenues are under attack as markets become saturated and traditional service revenues start to decline. Analyst firm Ovum forecasts that operators' mobile revenues in Europe would decline by 1.7% year-on-year in 2015¹.

Many developed markets, and remarkably all markets in Western Europe, will begin to see year-on-year declines in revenue by 2019. In fact, more than one-third of the 67 countries tracked in Ovum's forecast will experience some decline by 2019, and one-third - 25 markets - saw year-on-year revenue declines in 2014. A decline in retail connectivity revenues in many developed markets in Europe, North America and Asia-Pacific is imminent. Western Europe will see a CAGR of -1.7% between 2013 and 2019, which in absolute-value terms equates to a drop of \$15.3bn. All 17 Western European markets covered by the forecast are set to experience revenue decline over the next five years.

Aside from market saturation, revenues are declining because of the emergence of over-the-top (OTT) applications which has seen social, messaging and content-related applications provided by third parties replace MNOs as the service provider of these offerings to consumers. Even though they are being cut out of the value chain, MNOs still have to provide the network connectivity such services require. They're not sharing in the service revenue; they're only receiving revenue for providing the commodity network access.

A report from Juniper Research² in 2014 claimed that voice and messaging traffic lost to OTT players such as WhatsApp, Facebook and Skype would cost network operators \$14 billion in revenues globally that year, up by 26% on 2013.

Further detail on lost MNO revenues caused by OTT services has been provided by Ovum which has estimated that \$52bn was lost to OTT VoIP (voice over IP) in 2014. The firm also projected that more than \$40bn of SMS revenues would be lost to OTT social messaging in the same year.³

Commoditisation, caused by saturation and intense competition and the emergence of OTT players, represents multi-billion dollar losses in revenue per annum for MNOs but they face further revenue pressure as roaming revenues in the European Union are capped and, ultimately, phased out. In early 2016, the EU has put a cap on the amount MNOs can charge, limiting roaming surcharges significantly. Previous reductions have already seen the cost of roaming within the EU fall by 75% since they were first brought in, according to the European Commission. Consulting firm Deloitte has estimated that roaming revenues in the EU account for approximately 5-6% of MNOs' revenues.⁴

In order to demonstrate improved performance MNOs need to increase revenues but they are constrained in both capex and opex as they continue to invest heavily in network technologies. This means they are limited in terms of the investments they can make in new technologies and services.

¹ http://info.ovum.com/uploads/files/Ovum_Telecoms_Media_and_Entertainment_Outlook_2015.pdf

² [http://www.juniperresearch.com/press/press-releases/operators-to-suffer-\\$14bn-in-lost-revenues-this-year](http://www.juniperresearch.com/press/press-releases/operators-to-suffer-$14bn-in-lost-revenues-this-year)

³ <https://www.itu.int/en/ITU-D/Regional-Presence/ArabStates/Documents/events/2015/EFF/Pres/Maaref%20OTT%20Presentation%20Manama%202015.pdf>

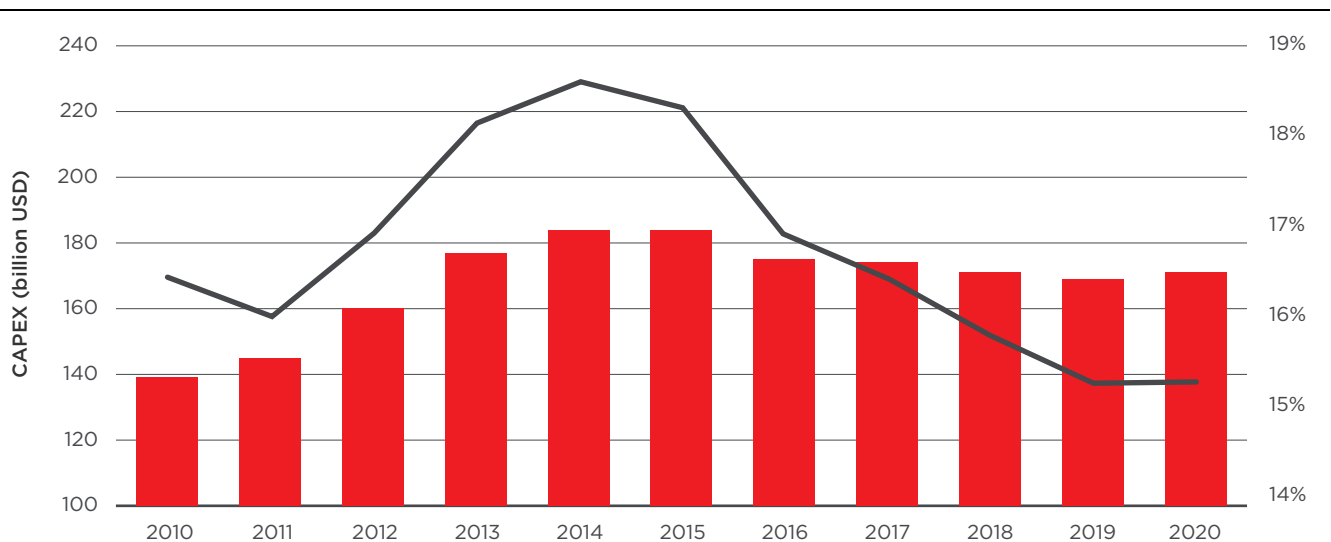
⁴ http://www2.deloitte.com/content/dam/Deloitte/de/Documents/technology-media-telecommunications/TMT-Roaming_safe.pdf

The Capex Crunch

Mobile operators have spent almost \$1 trillion in capital expenditure globally since 2010 on acquiring spectrum, rolling out 4G networks, extending the capabilities and coverage of legacy networks, upgrading core networks and on support systems and services to enable mobile growth, GSMA Intelligence reports. This investment peaked in 2014 at more than 18% of revenues, coinciding with a peak in Chinese 4G rollout, which extended into 2015.

This intense focus on network upgrades and the associated systems has limited MNOs in terms of investment in new services. GSMA Intelligence anticipates that global mobile capex as a percentage of revenues will contract over the forecast period as large scale 4G network rollouts near completion – with the exception of India. Markets which have already rolled out 4G networks will maintain a significant amount of capex for densifying networks and upgrading backhaul/core capacity in order to support rising data use.

Figure 1 – Global mobile capex and capex as % total revenues, 2010-2020



Source: GSMA Intelligence

Slowing revenue growth, coupled with an inelastic opex burden and sustained capex, has depressed free cash flow margins from 20% in 2010, to an average of 17% over the forecast period. This is putting pressure on MNOs to examine new growth areas to drive their top-lines, while at the same attempting to minimise costs.

The A2P Messaging Opportunity

One growth area in which MNOs can generate additional revenues is A2P messaging. It suffers from fraud and revenue leakage as grey routes are utilised and MNOs fail to maximise the opportunities and underestimate the full extent of the value A2P messaging can provide for their businesses

HAUD projects that, at a market price per message of around \$0.03 to \$0.04, an operator can estimate to achieve double digit percentage growth in revenues from new A2P traffic monetisation. It is challenging to create precise revenue predictions because of the differences between market price, region, data penetration and market penetration that affect individual operators. Nevertheless, based on its experience

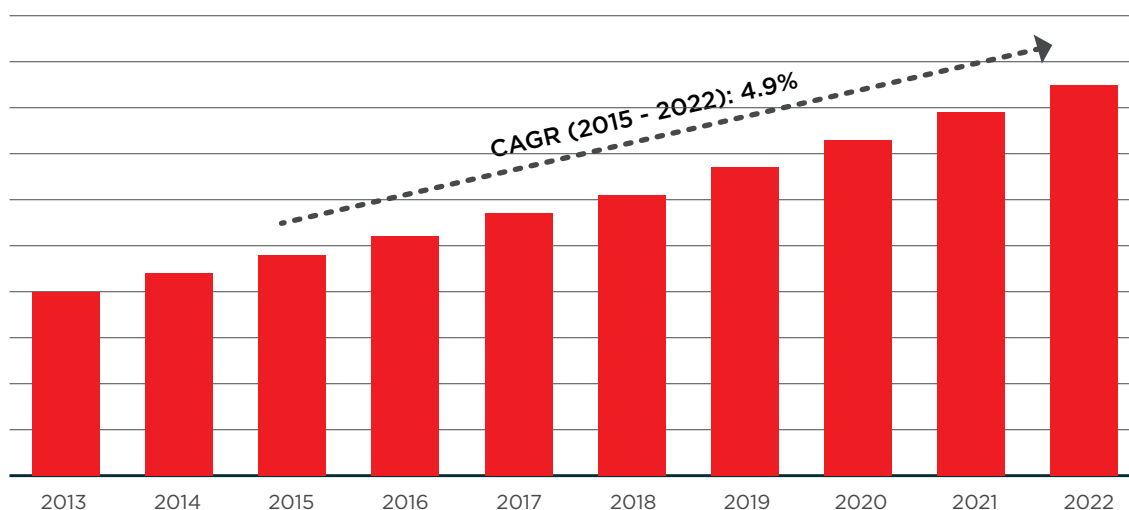
with clients and by way of indication, HAUD safely estimates that an operator with ten million subscribers that is able to achieve a market price in the range described above will be able to comfortably achieve additional revenues of \$450,000 to \$500,000 per year. HAUD cautions that operators could see higher or lower figures and emphasises that this figure is based on real cases in which all grey routes are effectively blocked and the traffic is channeled towards the monetisation route for A2P as per the operator's strategy.



Importantly, A2P messaging is now expected to see continued strong growth well into the next decade and potentially beyond as new applications for A2P messaging emerge. Credence Research projects a compound annual growth rate (CAGR) of 4.9% for A2P messaging in the period 2015-2022, with the market expected to exceed \$78bn by 2022.⁵ The use of SMS for advertising and promotional activities across a variety of verticals has gained significant interest recently, the firm reports. It sees the

arrival of mobile wallets, which are resulting in increased mobile payments and mobile-based transactions through one-time passwords, as a factor that will drive the A2P SMS market forward. Importantly, Credence Research emphasises that the reliability and ubiquity of SMS will see it continue as a carrier technology for media, utility and communication services for at least the next two years.

Figure 2: Global A2P SMS market revenue and CAGR 2013-2022



Source: Credence Research

The projections from Credence Research are borne out by a market report into the enterprise A2P SMS market published by Future Market Insights.⁶ The study reveals the global enterprise A2P SMS market was valued at \$23.4bn in 2014 and is expected to have a CAGR of 6.0% from 2015 to 2025. The growth of the enterprise A2P SMS market is primarily driven by the increasing number of mobile subscribers and enterprises shifting from a desktop-first strategy to a mobile-first strategy. A2P SMS are currently used for

various applications such as updating end-users with campaign perks, location-based opportunities, breaking news, promoting brands, polling and transactional messages by major industry verticals.

A2P messaging is therefore set to be a longer-term revenue opportunity for MNOs than previously thought. Revenue growth is expected to continue well into the next decade.

⁵ <http://www.credenceresearch.com/report/a2p-sms-market>

⁶ <http://www.futuremarketinsights.com/press-release/enterprise-application-to-person-sms-market>

Why a managed services approach removes barriers to entry and expansion

Even though the projections for sustained revenue growth from A2P messaging are attractive, MNOs continue to face capex constraints that make investing in the systems and personnel required to effectively manage A2P messaging services a challenge. A2P requires careful management and has suffered from substantial fraudulent activity. So-called grey routes, by which A2P messaging is carried without payment being remitted to MNOs, account for up to 66% of A2P network traffic, according to a report from research firm mobilesquared. Of further concern is that A2P messaging operates utilising the SS7 protocol. Recently the media has focused on SS7 because of the vulnerabilities in the protocol which make it a security issue that needs to be addressed immediately.

MNOs lack the tools and personnel to effectively filter and block fraudulent messaging that traverses their networks. Such filtering and blocking needs to happen as quickly as possible in order to minimise the impact of frauds but MNOs acting in isolation cannot quickly identify frauds that originate on other networks or have whole market knowledge of emerging and current fraudulent activities.

The fraud issue has become so embedded that only one-third of MNOs are able to monetise A2P effectively, says mobilesquared. However, A2P Business and Fraud Intelligence systems and services exist that are able to address and control the security issues affecting the market. In addition, there are systems and services that are on the market that enable MNOs to apportion revenues between MNOs that participate in A2P message delivery fairly and accurately. This correct revenue sharing is fundamental to the success of A2P messaging because all parties must be able to monetise their contribution to the delivery of messages proportionately.

Instead of following the traditional path of specifying technology, investing in personnel training and going through a lengthy integration process to gain the A2P messaging capabilities required to generate revenues effectively, MNOs can quickly and simply address A2P messaging by taking a managed services approach. This means they won't need to invest capex in systems up front and they won't need opex to put resources in the form of specialist personnel in place to manage their A2P systems and services. Further benefits include accelerated time-to-cash and the benefit of accessing a managed A2P messaging service provider's insights into the whole market. These can provide early warnings in relation to specific fraudulent activities and significantly ease settlement between different providers.

A managed service provider will operate the entire service, abstracting the complexity away from the MNO, apportioning revenues correctly to all involved. Revenue from A2P messaging is simply delivered to the MNO as a service.

The advantages to operators:

- No upfront capex costs
- No opex on specialist staff, system maintenance or licence fees
- Accelerated time to revenue because of no deployment delays or bottlenecks
- No learning curve
- Greater efficiency through using a provider that does this for many other operators
- Enhanced protection from frauds and security threats because a managed service provider can identify fraudulent behaviour across all the service providers it serves
- Time to cash is radically accelerated

The HAUD Service

HAUD has been leading the development of RaaS to support A2P messaging. The company was first to market with its offering having recognised both the revenue potential that A2P messaging offers and the capex and opex challenges MNOs face. HAUD truly provides MNOs with revenue-as-a-service by applying its experience of the A2P market and sharing the investment with MNOs to ensure maximum monetisation of A2P messaging for the MNO. MNOs can get started with HAUD with no upfront costs and start to receive revenues almost immediately.

HAUD has a proven track record of monetising A2P SMS within days of deployment of the managed service. That rapid time to cash is because of HAUD's proprietary technology that has been specifically developed to address this market and the personnel that HAUD uses to manage A2P messaging on behalf of MNO customers. For example, the company will ensure that it has native language speakers working to manage A2P services in countries in which customers operate. Native language skills make it easier for operatives to detect frauds because they understand message content and can therefore uncover fraudulent messaging more effectively.

The main focus of the HAUD Managed Services team is to increase A2P traffic for the client MNO above normal natural growth from authorised sources. That increase in volume results in an increase in revenues from A2P traffic and protects the MNO's customers' experience through blocking of spam and fraudulent messages.

HAUD's Revenue-as-a-Service proposition includes:

- 24/7 traffic and content monitoring
- 24/7 administration of the SMS and SS7 firewall
- 24/7 system monitoring, reporting and analysis
- 24/7 support
- Dealing with third parties to monetise SMS traffic
- Probe testing of the network and systems

SS7 Firewall Solutions

SS7 Firewall Solutions provide 360-degree protection of network entry points, eliminating grey route activity and re-directing desired traffic through official gateways to unlock A2P monetisation potential.

Managed Services

HAUD's Managed Services offer constant performance monitoring and optimum configuration, to ensure complete control and peace of mind with the minimum outlay of resources.

Remain in Control

Although the benefits of a managed service are attractive, MNOs often are cautious about passing management of revenue generating aspects of their businesses to a service provider. There's an understandable concern that this can result in a loss of control or lock-in to a specific service provider. HAUD understands MNOs' needs to take care when engaging a managed service provider and has worked to demonstrate proven business cases for taking a Revenue-as-a-Service approach to A2P messaging.

HAUD believes that by sharing the investment as well as the rewards with MNOs a trusted partnership between managed service provider and MNO is created that is mutually beneficial. The HAUD service is not seeking to take control from an MNO – the MNO still makes the decisions about what traffic to block and how it wants to operate its A2P messaging business. HAUD's value lies in providing the systems, tools and experts to manage the service as defined by the MNO.

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Conclusion

A2P messaging monetisation as a managed service offers great opportunities for MNOs to increase their revenues with no capex or opex and minimal management time. MNOs can utilise managed A2P messaging monetisation services to gain efficiencies and improve time to cash.

In addition, the A2P messaging opportunity is set to last for far longer and be greater than previously envisaged – thereby extending the lifecycle and the value to MNOs of A2P messaging. Apps in the IoT and cloud are likely to see A2P messaging value extend further and we foresee a period of at least 5-7 years of continuing growth for A2P messaging before it starts to flatten out. By that point analyst firms envisage A2P messaging revenues will be approximately \$78bn per year. That's a sum sufficiently substantial for MNOs to stop leaving on the table by paying inadequate attention to A2P messaging.

HAUD is truly offering MNOs Revenue-as-a-Service by taking the investment risk and sharing the rewards and maximising revenues for operators in A2P messaging. RaaS means no upfront capex and no opex, but a system, a service and intelligence brought together by experts to generate revenue by physically collecting it from all the A2P messaging sources and providing the MNO with its fair share.



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About HAUD

HAUD provides mobile network operators with a complete service to detect fraud, filter spam and protect revenue. HAUD puts operators in control of their networks with flexible solutions, unrivalled expertise and round-the-clock customer support. The proprietary technology safeguards revenue from telecommunications traffic, enhancing network security and enriches customer experience.

HAUD's portfolio of modular services and solutions can be deployed in custom configurations, providing operators with flexible and robust protection to meet precise requirements.

Headquartered in Malta and with offices globally, HAUD offers traffic audits, system trials and various pricing models.

Visit www.haud.com for further information.