

Leveraging the A2P SMS opportunity

Evolution of A2P SMS from notifications
to smart services



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Executive Summary

In a nutshell

In the past 20 years, SMS has led a wave of change in the mobile industry from creating a 100 billion dollar revenue stream for operators to inspiring OTT players like Twitter. As technology evolves, so does the role of the SMS. SMS is moving away as the mainstay of peer to peer communication and application to person SMS is gaining prominence with strong double digit growth rates. Ovum believes that the next four years will see an explosive growth in the number of A2P SMS based services and mobile operators should be well prepared to leverage the A2P SMS opportunity. SMS is becoming increasingly relevant as a bearer technology for not only the dissemination of information and content, but also for the purpose of verification, security, monitoring and access of services. SMS will continue to be utilized as a bearer technology for the next four years because of its ubiquitous, reliable and secure nature which no other technology is yet able to provide. Along with this, a range of creative services are emerging which use A2P SMS as a platform for VAS communications, these provide an app like experience for the feature phone users and deliver them with a richer range of services than earlier available. All of this heightens the need for operators to offer SMS APIs to be used by developers, vendors and publishers. A2P revenues show a potential for growth in an

otherwise declining SMS trajectory and A2P messaging has become the new “sweet spot” for SMS revenues.

Ovum view

SMS might be losing steam in the P2P arena but a long overshadowed form of SMS is becoming popular in the OTT era both in terms of growth in revenue and traffic, A2P (application-to-person) SMS. There is a strong 27% growth in A2P messaging traffic yoy (2011-2012) while P2P SMS is plateauing in most markets. This shift comes as a result of new data-based messaging services that have resonated with the consumer causing P2P SMS traffic growth to slow down. While, on the other hand the use of SMS in advertising and in verticals such as entertainment, healthcare, transport, and finance have become very popular, which has resulted in double digit growth for A2P SMS traffic. This heightens the role of SMS as a bearer technology for a variety of media, communications and utility services. This report intends to contrast the evolution of A2P SMS from simple alerts and updates to a wider range of services and functions. A2P SMS is rapidly becoming a key bearer technology for services such as connected home, identity verification, mobile commerce and banking. This involves innovative services that go beyond person-to-person messaging, and which tie in social messaging players as well.

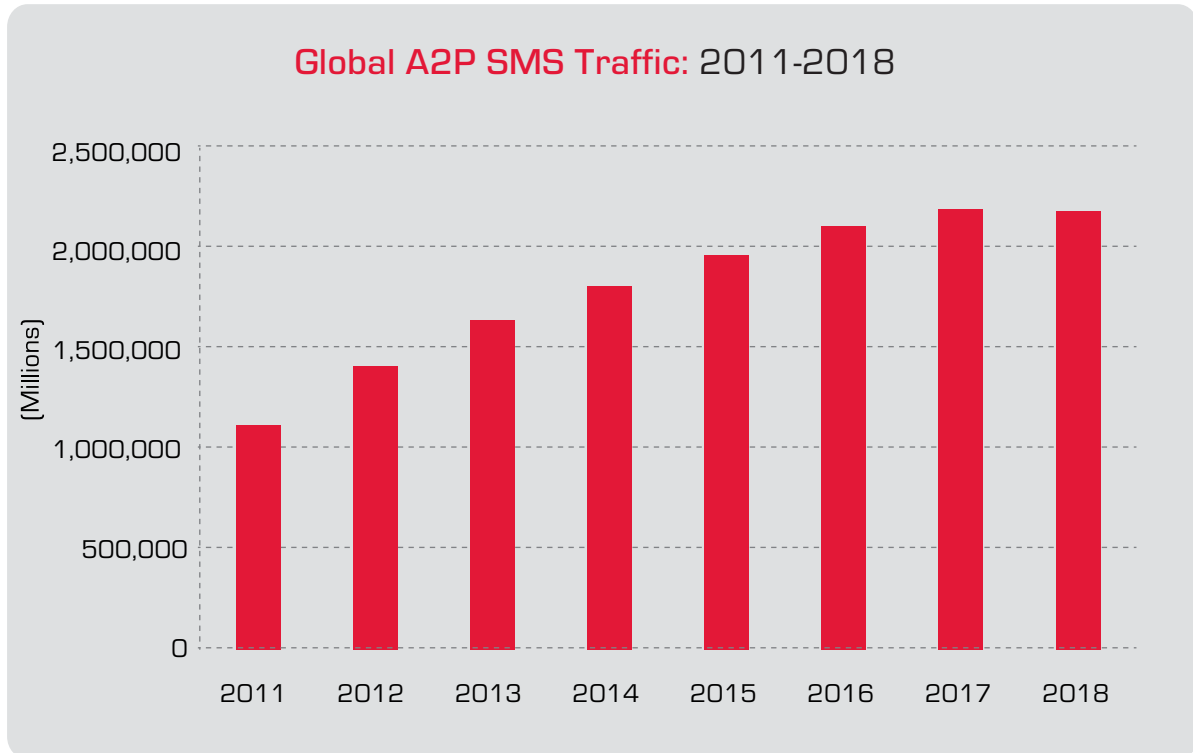
Several solutions based on SMS APIs already on offer by Maxis and AT&T for example, are around community-based services which marry IP messaging and SMS. The conversation within these communities is carried across the IP channel, but the additional services such as gifting mobile credit, exchange of personalized services or sharing a mobile wallet all use A2P SMS to initiate transactions and process confirmations. Multiple use cases have appeared across the globe from the use of A2P SMS for simple notifications to identity verification and even healthcare monitoring. This indicates that SMS has truly evolved beyond a simple notification-based VAS to one that cuts across multiple verticals (transport, finance, healthcare) and becomes a core and ubiquitous bearer technology to facilitate a range of services.



Evolution of A2P SMS

The size of the A2P SMS market

Figure 1: Global A2P SMS Forecast and Base data (2011 – 2018)



Since its launch in 1992 SMS has effectively established over a hundred billion dollar revenue stream for mobile operators, has become the bearer technology for a range of mobile value added services and has even been the inspiration behind successful OTT propositions such as Twitter. P2P SMS is in fact coming under pressure from OTT services but A2P SMS is still significant in the mobile industry. A2P SMS traffic grew by over 27% yoy in 2011-2012, and that was followed by a 16% increase in 2012-2013, with traffic reaching 1.6 trillion by the end of 2013. This represents 22% of total SMS traffic globally. A2P SMS will keep up this strong growth

for the next four years. In fact, the next four years provide operators with a window to leverage the A2P SMS opportunity.

The four year window of opportunity

The period of 2013 through 2017 will mark a golden age for A2P SMS. Ovum expects A2P SMS traffic to peak at 2.2 trillion messages with operators and third-party service providers launching a range of services across verticals that utilize A2P SMS for service initiation, control or monitoring. Ovum's mobile messaging forecasts

show A2P will grow at a rate of 6% CAGR 2013 – 2018, which when compared to the 3% decline in total messaging traffic is a healthy rate of growth. In 2013, the world would have transacted over 1.6 trillion A2P messages, and this will grow to 2.19 trillion A2P messages by 2018. Currently, feature phones outnumber smartphones therefore any consumer facing service that wants to have the widest possible reach must utilize SMS as a channel. However, in the next four years with the rapid growth of smartphones the balance of power will shift away from SMS and more products will utilize the IP network. This implies that operators have a 4 year window for them to create innovative services build on SMS (along with other technologies) in order to make the most of A2P SMS growth. The new “sweet spot” for SMS revenues lies in the A2P space and operators should look into harnessing this. A2P SMS has gained prominence in verticals such as healthcare, transport, finance and advertising through SMS APIs offered by operators. There is also strong demand in infotainment / media sectors with for instance, TV shows such as X-Factor which include a TV audience voting via short codes at premium rates.

From alerts to smart services

In earlier iterations of operator A2P services they would mostly fall under three categories, one

would be a bundle of text based information on topics such as humor, astrology and health, which operators sold as value added service on a daily or monthly basis. Another was through premium messages sent for voting on reality TV shows, and the third would be notifications or alerts around bill payments and transactions.

This three pronged approach to A2P SMS has vastly changed in recent times and A2P has evolved from simple alerts to a range of more sophisticated services pertinent to the smartphone age. The ubiquitous nature of SMS allows business owners to ramp up their service offering to consumers, both feature phone and smartphone users across markets and networks. A2P SMS, through SMS APIs offered by operators can be integrated on basic mobile web portals as well as on apps with easy to use and interactive interfaces and even scheduled delivery of messages. AT&T has had success with their enterprise A2P proposition with their financial institution clients sending over 10 million SMS communications per month using the A2P platform. Through its Global Smart Messaging Suite AT&T offers consumers a range of services that take SMS beyond conventional SMS alert services, by incorporating that extra value either through location awareness or providing an access code for security purposes. AT&T has used the combination of IP and SMS to create holistic services that can be applied to a range of verticals such as marketing, HR and commerce:

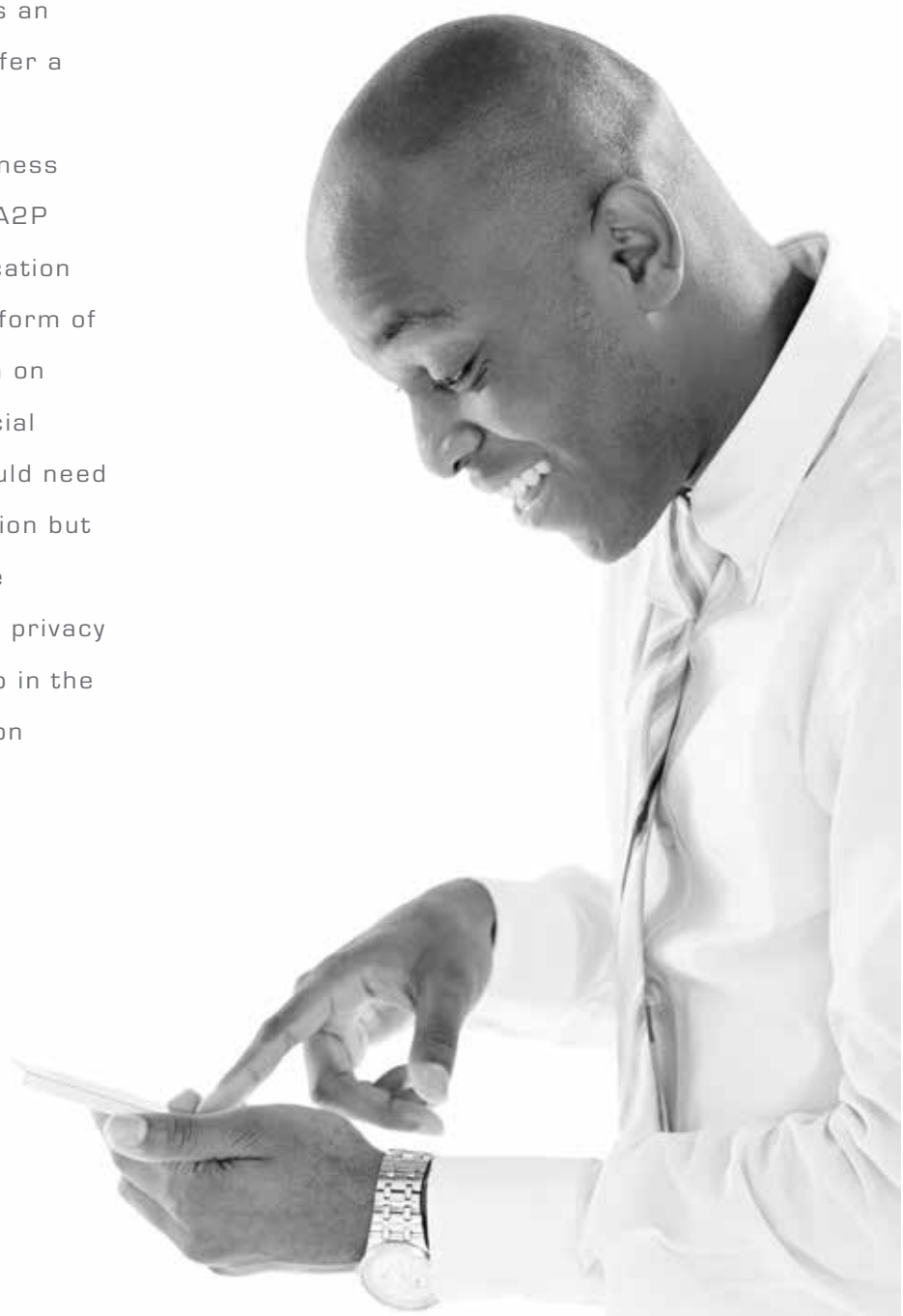
- **Mobile Authenticator:** This service allows the customer to key in access codes in order to access confidential material online. It provides a two-factor mobile authentication system that delivers a one-time password via SMS across any mobile network or market.
- **StaffMatch:** This service allows employers to efficiently schedule shifts with their employees. An SMS will be sent with the location and time of the shift, the employee must respond via SMS with his availability and the shift schedule will be automatically generated.
- **Mobile Gaming:** An SMS allows for easy communication with users to keep them up to date on individual and group scores, game updates, and more. Game developers can create their own short code and create opt-in opportunities for users to sign-up or subscribe to unlock additional game levels.
- **AT&T Alerts:** A service that sends out SMS on various sales and discounts that are happening in the area. This SMS campaign uses geo-location data to determine the customers' location and then sends out an SMS based on a pre-defined set of preferences set by the user. Some of the participating retailers are Gap, Staples, Duracell, Neiman Marcus, Zales and Motorola.

Smaller companies such as mobile payment app Square use SMS to verify the identity of the user as well as send a SMS receipt to the handset, while Maxis Malaysia enables the smartphone to monitor pulse rates and send the results over SMS. Maxis teamed up with the National Heart Institute of Malaysia (“IJN”) for healthcare content. The mobile operators and IJN have created a partnership to keep users informed on a range of healthcare services, advice and tips. By way of this partnership, Maxis will deliver all heart health related content to its customers, which they can access via any mobile phone with SMS features, smart devices or the web. The health tips range from categories such as pregnancy, heart advice, diet and general fitness all of which are delivered via SMS. More recently, Maxis introduced the EPI ECG phone, the world's first ECG Mobile Phone, a touchscreen multimedia mobile phone and device capable of recording irregular heart rhythms. A customer can take an ECG reading as and when necessary by just holding the phone with three fingers. Within a few minutes, they will receive an interpretation via SMS from a 24-hour Heart Concierge Centre. This demonstrates the use of SMS along with other technologies, in this case an ECG reading device.

The range of applications that can use A2P SMS are e-commerce services, customer relationship management, marketing, e-learning and security.

Enterprise and SME messaging

As mentioned above several businesses are currently making use of A2P SMS for a variety of functions ranging from healthcare to HR. In the P2P communication space as well, businesses communication necessitates a high level secure platform for exchange. There is an opportunity for operators to offer a comprehensive service which aggregates all streams of business communication and leverages A2P SMS for scheduling, HR, notification functions. This could be in the form of a business community platform on mobile or even a corporate social network. Each organization would need a certain degree of customization but such a platform would leverage operator strengths of security, privacy and reach as well as plug a gap in the current business communication domain.



The future of A2P SMS

As A2P SMS traffic peaks at 2.2 trillion messages in 2017, we will see a slow shift from A2P SMS to IP as the bearer technology as the world inches towards an IP dominated society. However, between 2013 and 2017 Ovum expects to see an explosion in the use of A2P SMS in a variety of creative and innovative ways. Currently there is a push from vendors and service providers to use the SMS channels for verticals beyond social networking such as utilities, healthcare, travel, or advertising. This is in the form of SMS alerts on ticketing, clinic appointment reminders, or bill payment alerts. There is a high level of demand backed by even more potential for SMS to be used in this manner. There are even services in the market which enable users to switch off electronic devices in their homes via SMS when outside the home such as security cameras, smart appliances such home heating systems, like in the case of SMS Central Heating System. More creative uses involve applications that open a locked door via SMS or can even send a SMS alerting the home owner of an intruder. In the near future, we will see wider adoption of A2P SMS almost replacing paper receipts and statements. Ovum expects devices at home to be controlled by SMS as well as IP channels. Mobile payments will also have SMS at the core of their proposition for the next 4 years.

OTT and SMS will work together

Social communication will be one of the main drivers of A2P traffic and revenues. Social networking services such as Facebook and Twitter will increasingly rely on both IP and SMS channels. Though IP channels are utilized a great deal for social messaging, SMS has begun to play a much bigger role in social messaging services than in the past. The interoperable, ubiquitous, and reliable nature of SMS makes it the ideal channel for social message alerts and transactional messaging activities. This includes payment notifications, friend confirmations, and message alerts – all of which rely on the A2P channel. Ovum believes that there will be an increase in A2P SMS traffic powered by social networks, messaging applications, and even VoIP services such as Skype. For instance, Google has a range of service built on SMS such as Gmail SMS, Google Voice SMS, Calendar SMS and Blogger SMS. This is because A2P SMS forms the perfect bridge between a user's online and offline worlds and therefore will grow in popularity till users enter an all IP mobile world.

In fact, more and more app developers are looking to embed SMS functionalities within their app to ensure that the app is able to communicate not only with all handset users but also with a range of service providers that utilize SMS. The decline in P2P SMS messaging will result in the IP channel showing growth in terms

of revenue and traffic, due to the mobile social services available to the users. However, this is not to say that this is the end of the road for SMS in the social sphere. It just flags up the need for operators to stimulate SMS through SMS APIs by offering innovative services which fit with user needs.

Tandem use of A2P

Perhaps the most interesting development in A2P SMS will be the tandem usage of SMS with other enabling technologies such as Wi-Fi, GPS, NFC, apps, QR codes, social networks and even Bluetooth. These technologies will no longer function independently of each other as mobile technology has reached a point where all the technologies must reinforce each other and create a comprehensive consumer service strategy. For example, in mobile commerce a SMS-based coupon could be used at the point of sale (POS) when a consumer pays for their purchase, or reading a QR code could automatically update a coupon into the consumer's mobile wallet. In health services, GPS can be used to locate the user and send a SMS with the nearest clinic location. Similarly, in transport, a SMS sent with the location of the user for a pick up. In order to create a truly value added service, all the elements must work in concert, and intelligently complement each other. There is already a clear tendency among connected home (service providers to

incorporate various technologies and solutions which intelligently interact with each other and either have a smartphone application or SMS as the final point of contact with the customer. The use of various technologies also enables the players to cast a wider net in terms of subscribers; and for smartphone users in particular it helps by providing a richer and easier user experience when the technologies complement each other.

The importance of carrier grade messaging

In world increasingly being divided into silos, SMS emerges as one non-voice communication channel that is interoperable, ubiquitous, secure and reliable. Social messaging apps might be effectively cannibalizing the P2P SMS traffic and revenue, there is no other mainstream cost effective, ubiquitous and interoperable technology which can compete with A2P SMS.

A2P SMS application by verticals

P2P SMS is completely based in the communication vertical, but A2P SMS is a technology that can be used across various verticals and integrate it with the mobile phone. Several operators and OTT players have launched interesting services in various verticals; the following is a brief summary of the ways in which A2P SMS has been used:

- **Finance:** A majority of the banks use SMS for not only information purpose but also for confirming a transaction through two factor authentications. A2P SMS has already become a vital tool in the mobile financial market.
- **Healthcare:** The healthcare industry has been impacted by SMS in a variety of ways, whether it's finding out the nearest clinic as is the case of Dr. SMS in India, which gets 1500 hits per day. Or it could be something simpler like receiving appointment reminders and test results via SMS such as the service provided by PING in Botswana.
- **Transport:** SMS ticketing is widely used within transport from aviation to public transit. Belgacom along with De Lijn, the Flemish bus and tram company in Belgium launched SMS ticket functionality. Commuters can send a message to a short code and receive a SMS ticket with a two hour validity. The cost of the ticket will be billed to the consumer via their carrier. This service was first rolled out to only Proximus customers, but has opened for all since 2011. Over 865,000 tickets were sold in the year of launch in 2010 indicating a good uptake of the service amongst consumers.
- **Security:** Besides from two factor authentication mobile payments and banking transactions, SMS is also used for a range of personal security applications. For instance, Mahindra Comviva has come up with a free app called FightBack which sends SMS to specified contact during an emergency.
- **Mobile Advertising:** SMS is still the most ubiquitous platform enabling marketers to reach the widest audience. For example, Kmart undertook a marketing campaign that not only sent out SMS coupons but also encouraged them to click of a link to their home page in the SMS and availing the discount. This not only drove more sales but led to higher engagement on their mobile web page. While Toys "R" Us has over 450,000 subscribers to their SMS program which regularly sends out promo codes for discounts that can be redeemed online. SMS allows brands to reach their audience without having to download or visit an app.
- **Utilities:** Utility uses for A2P SMS are around home monitoring, automated home, receipts for utility payments. More interesting uses of this are in the form of Nokia Life and Reuters Market Light, both of which provide relevant and personalized agricultural information to farmers through IVR and SMS. Reuters Market Light has over 1.3 million subscribers in over 50,000 Indian villages.

Table 1: Summary of use cases by vertical

Vertical	Use Case
Business and professional services	Security monitoring, HR staffing, recruitment, attendance
Education	Access control, child tracking, tutorials, exam results
Utilities	Home energy monitoring, payments, Home security, home monitoring, payments, agricultural information
Finance and insurance	Alerts, transaction verification, OTPs
Government	Security monitoring, smart cities, environmental monitoring, animal tracking, asset tracking, ticketing
Healthcare	Clinic search, test results, information dissemination
Advertising	Coupons, discounts, alerts, contests
Transport	Freight/asset monitoring, delivery tracking, connected car, navigation, ticketing

Source: Ovum

Recommendations for players

Operators have been presented with a 4 year window of opportunity to leverage A2P SMS either through SMS APIs to third party developers or through their own services. Operators should harness the popularity of A2P SMS before it reaches its peak in 2017 by laying emphasis on the following factors:

Carrier grade messaging is crucial for sensitive data services

There is a need for secure and reliable messaging not in a P2P context but in an A2P context. A large amount of sensitive data is being sent across SMS whether it is financial data sent to the consumer by the bank, medical reports sent to patients by clinics or sensitive mobile payment transactions between retailers and customers. Service providers will look for a delivery technology which is reliable, timely and most important not prone to data leakages. This is where carrier grade messaging can make the strongest impact.

Make A2P SMS more user friendly

One of the reasons P2P SMS has been ousted by social messaging is because it has an attractive interface and users find it easier to use. To an extent, it is also fairly intuitive in its functioning. Operators need to make the consumer facing user friendly which will encourage the use of A2P. Making SMS user

friendly could involve integrating it with apps through SMS APIs, setting up SMS personalization services and bringing out the intrinsic easy to use and simplicity of the SMS within an application.

Utilize A2P SMS for enterprise and SME messaging

The wide use cases available for SMS from shift scheduling to meeting reminders are ideal for an enterprise or SME messaging solution. Messaging for business involves a wider spectrum of functions and needs to adhere to a level of security and privacy levels and is therefore not ideal for current consumer facing IP based messaging platforms. A2P and P2P SMS would provide a good platform for not just messaging, but operators could offer unified communications and related services based on the SMS platform.

Focus on the service rather than the technology

The consumer does not concern himself with the technology used, he is more interested in the value he derives from a service and its cost. If mobile operators can provide a service that is relevant and valuable to the consumer, then it will be successful. Apps might be popular and a convenient way to offer a service, but the majority of mobile subscribers are currently feature phone users and a service which they can use will become mainstream.

Work with OTT players through SMS APIs

Adding value to the consumer is becoming more and more important in time when OTT players are making rapid advances in telecoms. The OTT developments have whetted consumers' appetites for utility and media services on their mobile phone, but not all of these users have access to smartphones and apps. The ubiquitous nature of SMS will allow the services to be reached to any consumer irrespective of geographical region. This presents an opportunity for operators and OTT players to work together to offer high quality, holistic services to the consumers. SMS APIs will play an even more crucial role in the next four years in ensuring an app can reach the widest possible audience and thereby impacting its adoption. The SMS API allows the application to communicate with all mobile subscribers around the world as well as servers and machines that use the SMS channel.

Pair SMS with other technologies

An effective pairing of new technologies (NFC, QR codes, GPS) with SMS can lead to intelligent and intuitive services that are relevant for the consumer. Operators have firsthand access to a subscriber's usage data, location - which can be used to create services that are relevant for the consumer.

Leverage the unique number identification and billing relationship

Mobile operators have two big advantages that no other service providers have - the unique number for identification of a user and a trusted billing relationship with the consumer. Due to these two reasons, operators will always be central in the subscriber's digital life. A2P SMS is the most reliable bridge between the unique number (offline) and the digital world. The billing relationship is also a crucial cog in this bridge, as it allows online services to be more easily monetized through carrier billing.

Appendix

This white paper was researched, authored and produced by Ovum in association with Mahindra Comviva, as part of a series of papers assessing the current state and future market direction of mobile broadband services for mobile operators.

About Mahindra Comviva

Mahindra Comviva is the global leader in providing mobility solutions. It is a subsidiary of Tech Mahindra and a part of the USD 16.7 billion Mahindra Group. With an extensive portfolio spanning mobile finance, content, infotainment, messaging and mobile data solutions, Mahindra Comviva enables service providers to enhance customer experience, rationalize costs and accelerate revenue growth. Its mobility solutions are deployed by 130 mobile service providers and financial institutions in 90 plus countries, transforming the lives of over a billion people across the world. For more information, please visit www.mahindracomviva.com.

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