

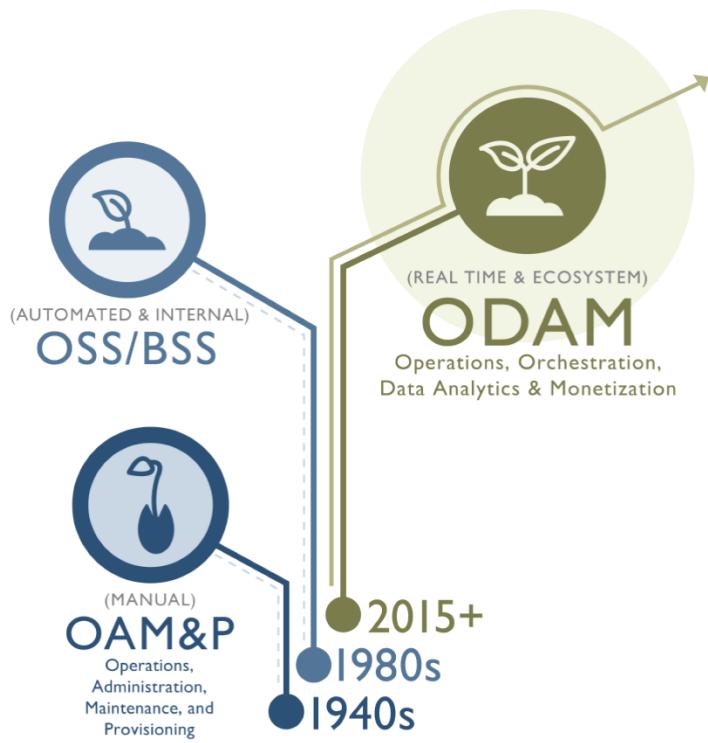
July 2018

Mobile Marketing and the Customer Experience

A How-To Guide for Enhancing Customer Engagement and Business Value

Stratecast Analysis by

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An Industry Thought-Leadership Paper
Prepared for Tata Communications

Mobile Marketing and the Customer Experience

A How-To Guide for Enhancing Customer Engagement and Business Value

Introduction¹

Consumers and business customers assume that mobile connectivity is always available and has the speed, capacity, reliability, and security needed to transport data between their device, other connected devices, and the cloud applications everyone takes for granted. However, network connectivity comes at a price to both a business and to consumers. In addition, expectations tied to network services are different depending on consumer needs, business necessities, and the perception of "good" service quality, which often varies from one market to the next.

Consumers inextricably link data volume, speed and service quality with price, so much so that they frequently change carriers to optimize the affordability of their service subscription. This approach plays out in all regions of the world regardless of how consumers pay for network services, e.g., by contract (postpaid), pay as you go (prepaid), or as a free Wi-Fi connection offered by many retailers, shopping malls, airports and other public venues.



While Mobile Network Operators (MNOs) continue to wage "customer acquisition wars," by competing on price and data usage volume, enterprises are also implementing omni-channel consumer engagement strategies. For the MNO channel, supporting services that deliver enterprise consumer engagement and 3rd party partner capabilities can provide new consumer incentives and the potential of increased revenue. The mobile channel provides exciting opportunities for enterprises to enhance engagement with their customers and to identify new business opportunities. For example:

- How do customer expectations change when a business engages with customers via digital offerings, where the business covers all data access costs for the engagement?
- What are the outcomes if such engagements also offer "free mobile data" as a loyalty reward for doing business with a particular enterprise, even if multiple MNOs are involved in providing connectivity for the enterprise's total customer base?

¹ In preparing this report, Stratecast conducted interviews with representatives of Tata Communications:

- Jeff Bak, Head Enterprise Mobility Solutions and Business Development Americas
- Frederic Dingemans, Head of Digital Commerce and Mobile Money
- Nishith Gupta, Director Mobility Services
- Emilie Trahan, Manager Mobile Products and Digital Commerce
- Ben Bannister, Director Product Marketing, Mobility and IoT Services

Please note that the insights and opinions expressed in this assessment are those of Stratecast, and have been developed through the Stratecast research and analysis process. These expressed insights and opinions do not necessarily reflect the views of the company executives interviewed.

- Do customers react differently to mobile messages offering insight or useful information from an enterprise that they regularly use or from a services organization they occasionally do business with such as an insurer, financial institution or automobile dealership?
- Will consumers keep "digitally engaging" with enterprises that offer loyalty rewards each time the customer does business with the company? Rewards that not only include free mobile data allocation, but free offers from other business partners?
- Will customers stop doing business with companies that do not offer something extra?
- Where allowed by regulation, how do customers react to offers that enable gifting of mobile data allocations, to their circle of friends, family or preferred charity?
- Is business success for both the near- and long-term now defined by how easily customers navigate an organization's sales processes, engage with the business via an omni-channel experience, and in building loyalty rewards with flexible usage options?

This report discusses mobile customer engagement and how the need for shifting of the cost of mobile data usage to alternative partner-powered business can be an effective means for enabling enterprises to better meet the needs of their customers. It describes how using traditional network-based functions such as mobile messaging and advanced data usage accounting has delivered new business opportunities for some MNOs and their enterprise partners. The report also shows how a wholesale network communications connectivity provider—Tata Communications—is making a difference by improving the customer experience through business model change.

The Global Mobile Services Landscape and a Need for Change

Shown in Figure 1 below, the mature markets of North America, Europe, Australia, Japan and South Korea comprise the global postpaid² market, which is approximately 17% of the total number of mobile connections. The global prepaid³ market, comprising 83% of the 7.75 billion global mobile connections, is significant and is generally the most responsive to pricing sensitivities.

Both prepaid and postpaid billing plans are available in all countries of the world, but cultural factors, economic issues, and the business models historically invoked when voice and messaging communications services were first introduced to a geographical region show preference for one billing model over the other. For example, 94% of mobile customers in Japan, 86% in Canada, and 78% of mobile customers in the United States use postpaid billing plans. By comparison, 67% of mobile customers in Brazil, 86% of Italian and 96% of both Philippine and Pakistan customers are prepay customers.

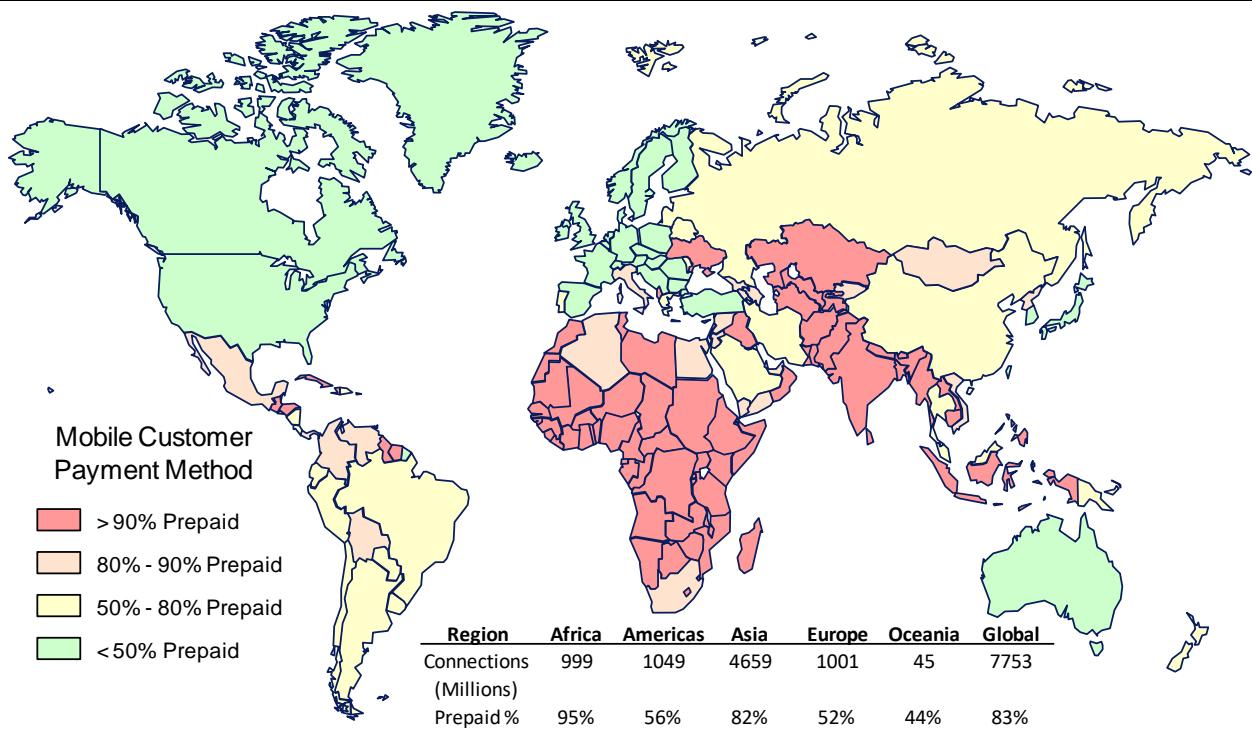
Consumers in every global market now spend, on average, the maximum amount they believe they can for communications devices and the "right" data usage options for their situation. Some markets have a much higher level of spend than others, but mobile consumers

² Postpaid billing plans charge for voice, text and data access services generally following a 30-day usage cycle. Most plans have a contract commitment period which is variable by mobile operator and measured in months. The device or devices associated with the plan are purchased separately, but the cost of such may be amortized by some MNOs over a 1-2 year period without interest charges. These charges are paid for as part of the customer's monthly bill.

³ Prepaid billing carries no contract or commitment. Mobile services are paid in advance through a usage card, SIM chip, or similar permission enablement token. The mobile device is purchased separately. As an integral part of this payment strategy, customers are notified of usage consumption and remaining balances after a service is used.

everywhere seek to get more service capacity (primarily mobile data volume) for less than what they pay now.

Figure 1: Global Prepaid Communications Services (Voice, Text, Data) Markets by Country



Source: GSMA Intelligence 2018, Stratecast

MNOs are feeling this squeeze as the average revenue per user (ARPU) fell by 3.05% for the most recently reported year (2017).⁴ In addition, the global mobile subscriber market is now 7.75 billion connections, which grew at a 6.2% YoY rate.⁵ Perhaps the most startling insight that comes from global mobile traffic measures and forecasts comes from the 4.3 billion smartphone subscriptions noted in 2017, which are expected to grow to 7.2 billion by 2023. With this increase comes data usage volume per device, which is expected to rise from an average of 3.4 GB per month per smartphone to 17.0 GB per month per smartphone in 2023 as 5G technology takes root.⁶

Mobile Network Operators must find new ways to work with enterprises to deliver customer engagement models or else face drastic financial consequences. Addressing this revenue challenge is no longer sustainable using traditional business models based on network services alone.

Partner-enabled service offerings where MNOs and enterprises from various industries work together to enhance the customer experience is a strategic next step.

⁴ Global mobile ARPU in 2017 dropped by 3.05% compared with 2016 as noted in [GSMA Intelligence, 4Q17](#).

⁵ Stratecast insights obtained from [GSMA Intelligence, 4Q17](#), using by country, by region details and global summaries of mobile connections as reported by the GSMA.

⁶ Ericsson Mobility Report, 2018 edition.

Coupled with a rising 7.41 billion global population⁷ most markets need to change. MNOs must find new ways to work with enterprises to deliver customer engagement models or else face drastic financial consequences and further industry consolidation. In prepaid markets for example, especially where pricing sensitivity and consumer ability to spend on communications services are stretched the most, MNO revenue flow is no longer sustainable using traditional business models based on network services alone. A different approach is needed. Partner-enabled service offerings where MNOs and enterprises work together to enhance the customer experience is a strategically logical next step. But, how will MNOs accomplish this objective? New business models mean process and systems change if evolving customer expectations are to be met. Are there alternatives?

The World of Evolving Digital Services

Generating new revenue from new business opportunities, not just lowering the cost of doing business as usual, has long-been the goal of enterprises in every type of on-line digital business to date. Yet, over the last several years most of these organizations have spent a major amount of time and effort focused on driving cost out of the business and less time on developing ways to define and deliver new revenue streams. Some organizations however, have succeeded in changing how business is defined and the way customers interact with the digital world. Companies that prominently standout in this list of achievers include Airbnb, Alibaba, Amazon, Apple, eBay, Facebook, Google, LinkedIn, Microsoft, Netflix, PayPal, Salesforce and Uber among several others.

Using the last published data concerning partner ecosystems and platform-based companies that engage them, in early 2016 there were 176 public and private companies globally that each had \$1 billion or more in market value. This group of elite companies was estimated to have a global market capitalization of \$4.3 trillion,⁸ with most of them delivering business value as cloud-based services.⁹



What makes these companies, often referred to as Over the Top (OTT) providers so successful? It is their ability to define and monetize partner ecosystems, which create high customer appeal and business value well beyond the price that can be charged for pure-play network services. Yet, all the

⁷ Country and world population estimates from The [CIA World Factbook](#).

⁸ Market capitalization is the total dollar market value of all of a company's outstanding shares. It is calculated by multiplying a company's shares outstanding by the current market price of one share. Global survey results were conducted and published by The Center for Global Enterprise, in: [The Rise of the Platform Enterprise – A Global Survey](#), January 2016.

⁹ Cloud-based services involve several attributes including on-demand, always connected, flexible, real-time, and self-service—in short, personalization not just for consumers, but businesses and enterprises too.

services delivered by these companies continue to rely on a cost-effective, secure and reliable network connection coupled with a mobile access device—smartphones, tablets, or laptops.

Platform-based customer experience strategies work well, as the numbers show, when multiple enterprises from a variety of industries contribute toward a sea of continuously defined new service offerings especially when such offerings are geared to particular markets or geographies. They become even more customer-appealing when services are personalized toward the needs of a specific enterprise's target market or customer base. Delivering customers what they want still depends on critical network infrastructure functions such as mobile broadband for data exchange with the cloud, location services and mobile messaging technology.

Using advanced monetization models supported by new business strategies that still depend on traditional mobile network functions, enterprises and consumers benefit in ways that were not possible in a single supplier, single provider environment.

Implemented Messaging and Loyalty Management Examples

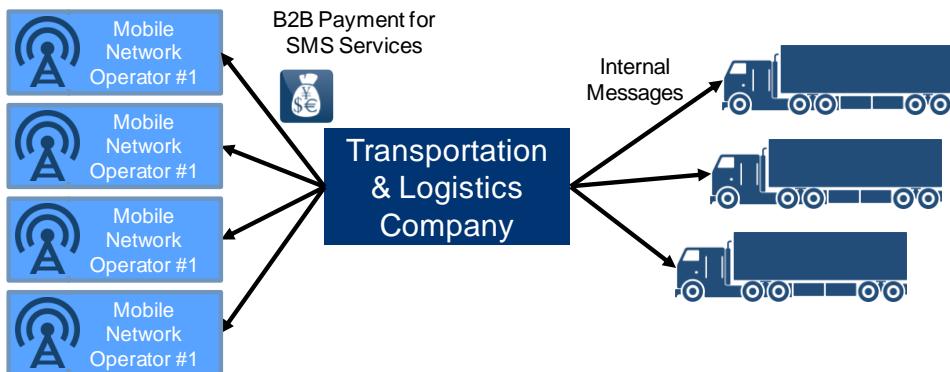
There are many industries taking advantage of mobile messaging solutions in various forms and capacities including: healthcare, government services, advertising, travel & hospitality, media & entertainment, finance, banking, retail, education, insurance, utilities & energy, and human resources. A few operational examples with varying degrees of complexity are noted next.

Transportation & Logistics

Several business functions are improved or enabled via mobile messaging within the transportation and logistics industry. They include driver shift scheduling, other staff management, notification to customers of package delivery, driver communication in remote areas, route rescheduling, last minute load pick-up, driver reminders, and sent message tracking. These functions are essential to the business and are enabled significantly through two-way messaging.

Multiple trucking, shipping and delivery companies now use mobile messaging solutions in all regions of the world. As noted by Figure 2, transportation companies are often challenged with MNO jurisdictional and serving area limitations, which force them to work with multiple network operators to deliver ubiquitous coverage to the areas they serve.

Figure 2: B2B Wholesale SMS for Internal Business Use



Source: Stratecast

Retail Sales

A large retailer noticed a high rate of cart abandonment from lower-priced merchandise, with the main reason for such tied to delivery cost. Changing its processes to enable online customers to pick-up items in-store, without delivery charges, customers were sent SMS messages notifying them that their item was available and would be held for 23 days.

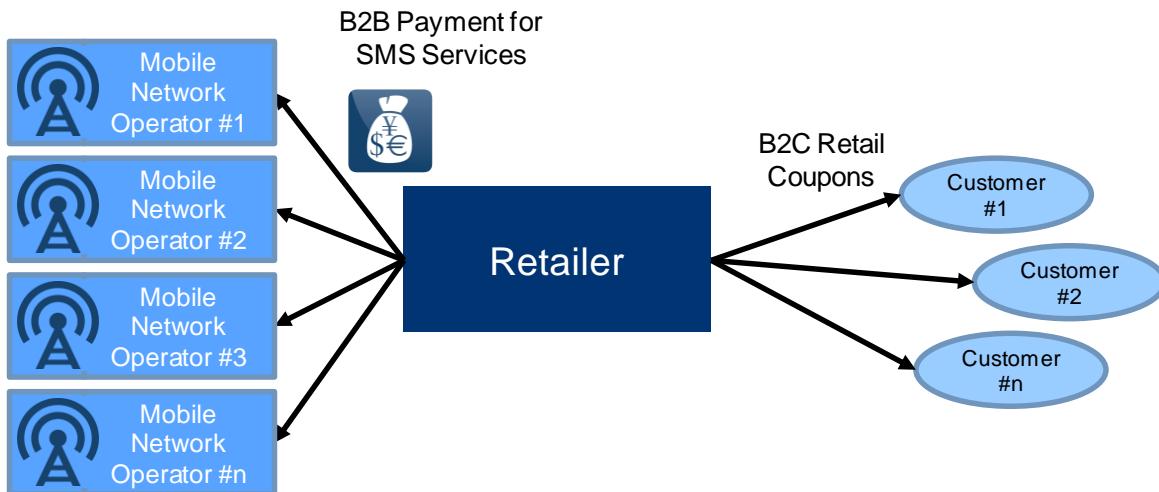
Shortly after implementation, this retailer noticed that the amount of uncollected goods within the 23-day period began to increase. The company sent a second reminder SMS to customers five days before the end of the collection period. This reminder reduced the number of uncollected items to slightly more than 5% of the total number designated for in-store pickup. The retailer also sent each customer a \$5 discount off their next purchase with the first SMS. The offer was increased to \$10 with the five-day notice SMS.



The combination reminder SMS process helped to boost retail sales as customers browsed the store and bought additional items with their online pickup. Continuing with the messaging strategy, the day after a customer redeemed a coupon in-store, the company sent a third text message with a time-bound "\$5 off your next purchase" coupon, which could be redeemed online or in-store. Sales were elevated at both venues.

In this example, as shown in Figure 3, a B2B relationship with wholesale payments runs between the retailer and its messaging service provider(s), while B2C relationships are between the retailer and its customers. In the future, this retailer is planning additional messaging strategies using SMS to engage customers with loyalty rewards and partner offers.

Figure 3 - B2B, B2C Retailer Coupon Delivery via SMS



Source: Stratecast

Insurance

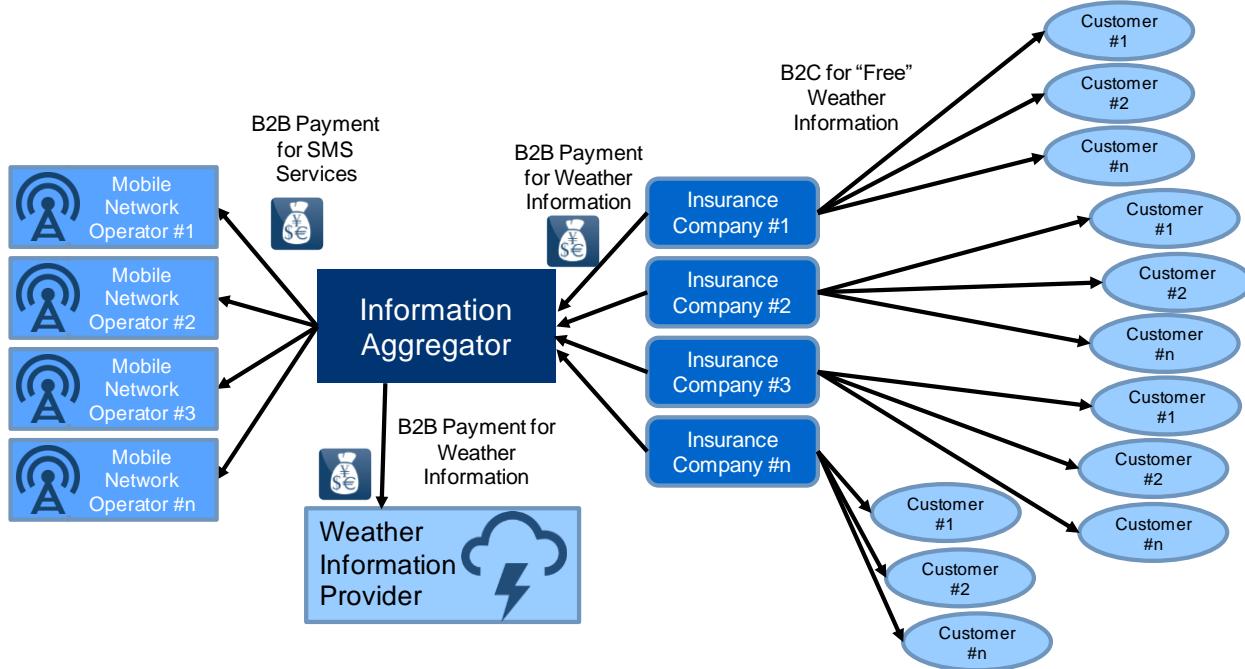
A European-based information aggregator provides bad weather alert messages via SMS to a variety of organizations, including insurance companies, who then forward these text messages to their global clients. Clients include emergency services teams, farmers, transportation businesses, shipping logistics companies, and large-scale sporting event organizers among others.

During an active storm situation, multiple messages are sent to a large number of people over a short time period. The business objective is to alert people to take appropriate protective actions when abnormal weather occurs, and as a by-product, help to reduce the potential for property liability claims. Texting further allows authentication of individuals and circumstances when claims reporting is needed following the aftermath of a severe storm.



Shown in Figure 4, wholesale payments for the text messaging services used in this example are through B2B contracts between the information aggregator and each MNO involved. Another B2B contract is between the information aggregator and the weather information provider. A third set of B2B contracts provide payment to the aggregator from each of its business customers—the insurance companies. Each of the insurance companies, through a B2C relationship perceived as a free service, sends weather alerts to its customers—transportation businesses, shipping companies, and others.

Figure 4 - B2B, B2B, B2B2C "Free" Information Delivery via SMS



Source: Stratecast

Banking and Financial Services

Several financial institutions now provide mobile banking capabilities in various degrees. Most transactions are completed via smartphones where available and for non-smartphone customers, a subset of capabilities is available. To minimize fraud in most cases, SMS is used for personal authentication prior to accessing an account. This is done by using a two-way login involving a one-time password sent to the mobile user by the bank.

Banks have incorporated SMS into some notification processes, for example when balances get low in an account, when money is added to an account, or for certain types of promotions that are delivered to customers through an opt-in process. Major North America banks using SMS for both security reasons and other business purposes include Bank of America, Chase, and Wells Fargo.

Remittance companies such as Apple Pay, Google Wallet, PayPal, Square Cash, and Venmo, use SMS for various business and security purposes at different stages of the customer lifecycle. Some, such as American Express, even use SMS messaging in other ways to provide customers with added benefits that include advanced access to event ticket purchases and related retail offerings.



Tata Communications Mobile Messaging Exchange and Digital Commerce Platform

A major challenge with the solutions involving the above-listed industries is the tie to a specific geography or MNO partner. **For enterprises with either a multi-region or global focus, these organizations need a one-stop messaging solution capable of delivering information to all customers, not just those subscribing to a particular MNO.**

In addition to exploring new ways to incorporate mobile messaging into their business practices, some enterprises are exploring more advanced customer engagement business cases enabled by sophisticated monetization models. This is the very formula that both MNOs and enterprises have anticipated from the current round of business digital transformation. These new strategies blend loyalty rewards, data gifting, and mobile data sponsorship, with the global delivery of mobile messaging functionality for an improved means to deliver an enhanced customer experience.

Tata Communications,¹⁰ with its connectivity relationships across multiple countries and territories, has constructed its Mobile Messaging Exchange and Digital Commerce platform to enable businesses and MNOs a single point of interface to meet the needs of the complex monetization models just described.

Importance of an A2P Mobile Messaging Exchange

Mobile messaging is not new. Using an SMS message to alert logistics personnel of a truck routing change or to notify a customer of a package delivery has been at play for several years. When applied

¹⁰ Tata Communications is a global provider of a new world of network connectivity to multinational enterprises and service providers, with its roots in the emerging markets. The company owns and operates one of the largest subsea cable networks with connectivity to more than 240 countries and territories across 400 PoPs. Headquartered in Mumbai and Singapore, it has approximately 8,000 employees across 38 countries. The \$2.9 billion company is listed on the Mumbai Stock Exchange and the National Stock Exchange of India. It is the flagship telecoms arm of the \$103.3 billion Tata group.

in today's digital environment, mobile messaging becomes an augmentation to smartphone apps that convey information between partners, between work teams within the same company, or between an enterprise and its customers. In this environment, there are growing levels of complexity within an Application-to-Person (A2P) messaging-based business scenario not traditionally present in Person-to-Person (P2P) messaging services.

The market opportunity for A2P messaging is growing, while customer interest in traditional P2P messaging is diminishing as OTT instant message apps incorporate P2P functionality. However, A2P messaging originators—OTT providers, enterprises, A2P aggregators—face multiple challenges, especially relating to delivery cost, margin erosion, message delivery quality, and in ensuring maximum reach.

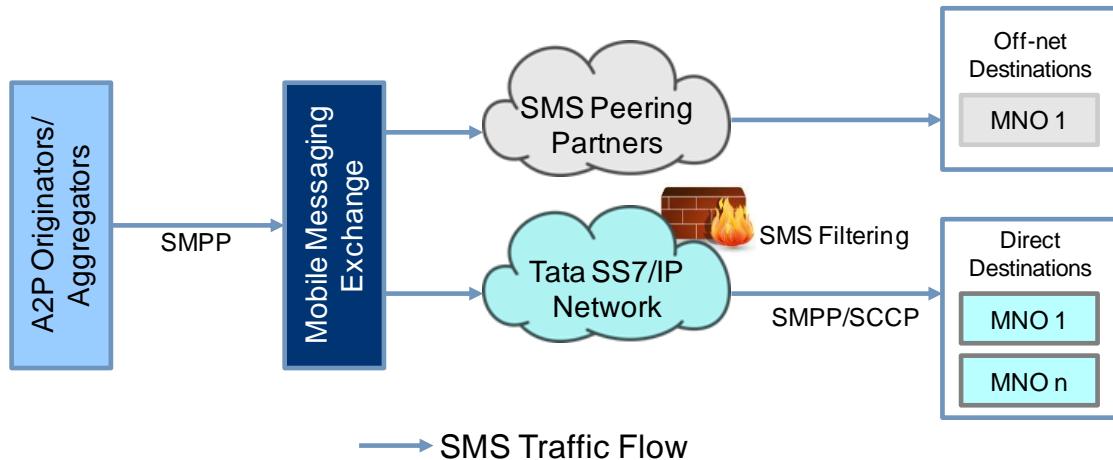
A2P messaging differs from P2P messaging in various ways. Of most significance is gaining the ability to secure quality SMS delivery routes, together with extended global reach. In addition, the messaging originator must have the option to terminate messages on as many mobile networks as needed. As in the case of the inclement weather example noted previously, an insurance company will have clients using different MNO networks. For success of this type of service, the insurance carrier needs to get a bad weather message out to its clients. Also, the A2P messaging originator needs predictable SMS delivery with the option of two-way SMS exchange across the same established links. Hence, message delivery quality and reach, rather than just reach, becomes the primary goal.

The business challenges that come with A2P-based solutions can be summarized around:

- Support for message termination to multiple, global destination networks
- Predictability in terms of known destinations for messaging termination
- Single point of distribution for SMS traffic, to minimize administrative effort and cost

Tata Communications Mobile Messaging Exchange

The Tata Communications Mobile Messaging Exchange, as noted in Figure 5 below, enables the creation of a dedicated A2P messaging hub type model, with access to global messaging routes by engaging with Tata Communications own commercial relationships with MNOs globally.

Figure 5 - Tata Communications Mobile Messaging Exchange

Source: Tata Communications, Stratecast

To make the exchange operable, Tata Communications negotiates messaging termination with its MNO partners and messaging peering partnerships. It sells access to the hub to A2P messaging originators.

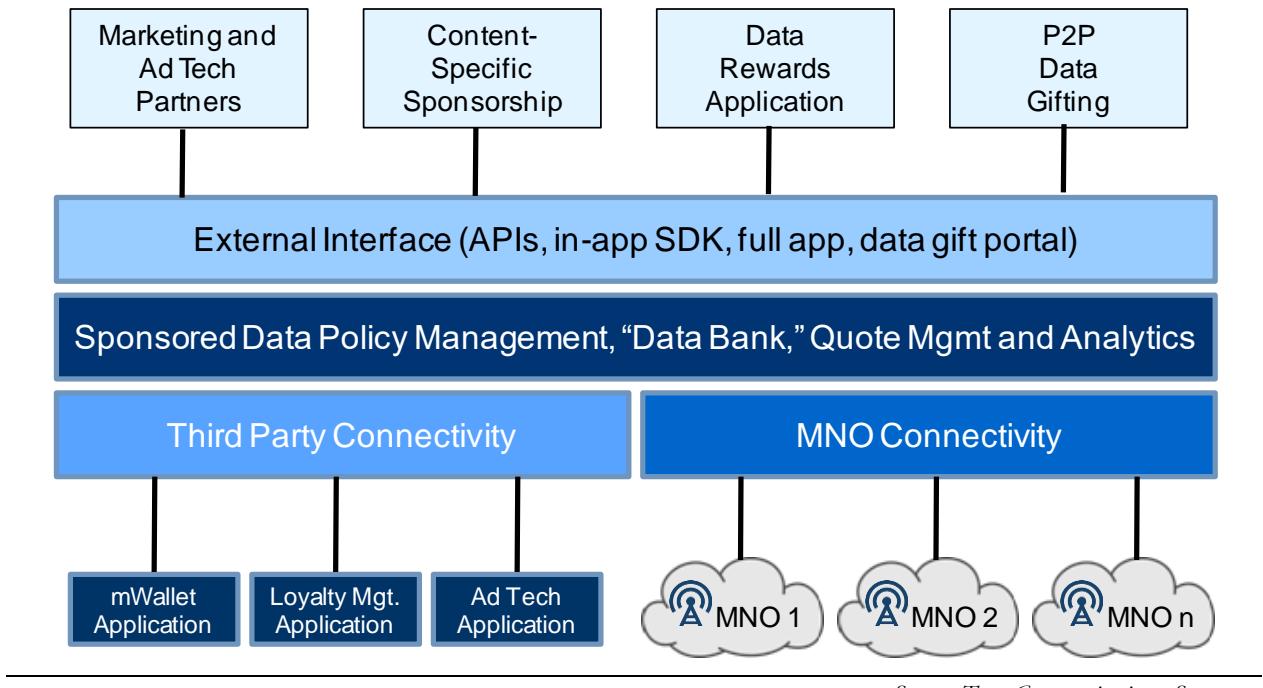
The Tata Communications hub model for A2P messaging means that message originators can work with a single party, which makes it easier to secure access to global routes, along with more commercial flexibility. Payment options include per SMS charging as well as pre-paid and post-paid models to enable messaging originators to indirectly work with on-net aggregators and OTT service providers through Tata Communications global signaling network.

Opari¹¹ - Tata Communications Digital Commerce Platform

Similar to its Mobile Messaging Exchange, Tata Communications' Digital Commerce platform is a two-sided market model that enables enterprises to engage with consumers in various ways, so that consumers can access and use 'free' mobile data allocations in the form of rewards, gifting or sponsorship models. The platform, branded as 'Opari', enables a consumer to access applications and content by engaging through a "sponsor pays" type business model. Opari is a powerful marketing option for enterprise brands, publishers, and app providers to expand their audience and increase consumer engagement. Increased engagement leads to incremental monetization opportunities through a variety of techniques including loyalty rewards, ad-funded services, subscription upsells, direct purchases or data gifting models.

The Opari framework is presented in Figure 6. It enables content and app-specific mobile data sponsorship, ad-funded content sponsorship, mobile data rewards to enhance subscriber loyalty and mobile data gifting to turn mobile data into a tradeable commodity. Service capabilities enabled by Opari can be sold through a white label, co-branded or as a non-branded solution model.

¹¹ <https://opari.io/>

Figure 6: Tata Communications Opari Digital Commerce Platform

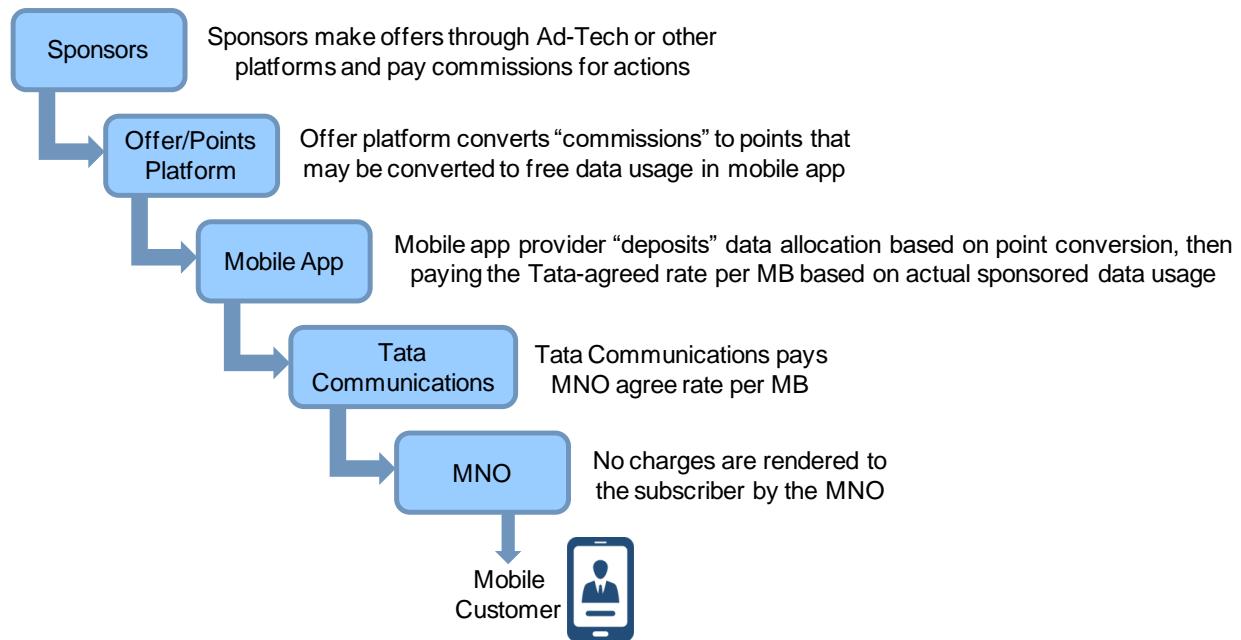
Source: Tata Communications, Stratecast

Opari enables enterprises to engage, promote and distribute content to target customers. Easy onboarding is made possible through cloud-based Application Programming Interfaces (APIs). Additionally, Opari enables sponsorship across mobile ad engagements and mobile content engagements such as streaming video, music, data storage apps, messaging apps, traffic & travel, games & in-app purchases, voice services and coupon redemption.

Access to Opari is provided through a low risk technical integration via white-listed IP addresses. All traffic routing to these addresses is zero-rated and charged to Tata Communications at agreed rates. Opari also enables flexible commercial models either as exchange-based (many-to-many relationship between MNOs and enterprises) or hub-based (direct bilateral agreement between a single MNO and an enterprise.)

An example of how Opari offers both enterprises and MNOs high value is the mobile data rewards model, which is shown in Figure 7 below. Examples of usage include game publishers that reward top gamers with virtual currency or VoIP and IM apps that reward users with airtime credits. Other examples have been applied to online shopping where users earn cashback from retail purchases, coupons that apply data rewards for coupon redemption, rewards for product searches, and giving customers free data when they use an enterprise's mobile app.

Opari takes a similar approach with mobile data gifting. In this case the 'sponsor' relationship can be either peer-to-peer, or a gifting relationship between an enterprise and its customer, in similar mode to the way that mobile data loyalty works. Data gifting, data rewards and sponsorship models release pent-up demand for access to data services and converts this into enhanced customer engagement and consumer spend.

Figure 7: Tata Communications Opari Mobile Data Rewards Model*Source: Tata Communications, Stratecast*

Stratecast

The Last Word

As with anything in nature, chaos theory implies that no matter how tight the controls on a system or process, something will cause a change that will deliver a simpler, easier and more beneficial approach to whatever the challenge, thus rendering such controls useless. This change happened when analog mobile became digital. It happened when touch-screen devices, coupled with an app store ecosystem, redefined customer focus and mobile data usage. It happened again as tiered-usage data pricing forced metered voice and text to be inclusive of the mobile data plan. Change is happening once more, as a means for increasing data usage for customers that are rapidly embracing mobile broadband and a digital lifestyle.

This time around however, customers are also saying they are not willing to pay more for the data they use and in reality expect to pay less as data consumption continues to increase. If predictions are correct, and they have been ultra-conservative the past few years, mobile data consumption levels will increase on average from 3.4 GB per month per smartphone today to 17.0 GB per month per smartphone in 2023. To make the MNO business case for building network capabilities work, advanced monetization models must positively play out in a win-win manner for consumers, for MNOs, and now especially for enterprises that view new data sponsorship models as an improved means for engaging with consumers. The connected everything world that is coming as advancing new technology tied to 5G evolution becomes a business reality, will force the sponsorship model to get serious attention.

A rethink of mobile data pricing and usage for all consumers may be just the ticket towards further opening the door of app development innovation and customer satisfaction. Just as it has been with technology evolution and business strategy transformation in times past, sponsored mobile data sessions and mobile messaging-enriched services will likely become how the next generation of customers engage. Tata Communications has shown how its Digital Commerce Platform (Opari) and Mobile Messaging Exchange can not only enhance consumer engagement and breed service offerings not imagined in the past, but spreads the data usage load across the commercial ecosystem, beyond the consumer.

Is business success for both the near-term and long range now defined by how easily customers navigate an organization's sales processes, engage with the business via an omni-channel experience, and in building loyalty rewards with flexible usage options? As 5G evolution becomes business reality and as retail brands digitally transform well beyond the brick and mortar establishments they were in the past, yes loyalty rewards and message-based retail offerings will be the norm rather than the exception. The real question is where does your organization fit in this evolutionary process?

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About ODAM

The processes and tools that communications service providers (MNOs) have utilized to run their businesses have changed over time. More than a half-century ago, MNO network and business management processes were manual (OAM&P). As MNOs evolved over the years, so did the operations support systems (OSS) and business support systems (BSS) that address MNO business and network management needs. In recent years, the lines between OSS and BSS have become less clear, with much overlap. In addition, the roles in which OSS and BSS operate have expanded beyond traditional boundaries. As such, Stratecast now uses the term Operations, Orchestration, Data Analytics & Monetization (ODAM) to encompass both the traditional OSS and BSS functions and the new areas in which business and operations management must now work together, including virtualized networks and telecom data analysis.

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