

Driving messaging revenue growth in a world of 'free'

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Introduction

In recent years, mobile subscribers have incorporated a wide range of new communication methods into their daily lives. These subscribers have not simply replaced one service with another, but have continued using all, each of them for their own specific added value: e-mail for more formal communication (or messages that can wait), SMS for quick messages to anyone, Instant Messages to friends that are online in the same community and 'Ping' messages to friends with smartphones that use the same Ping application¹ too. In addition, other well-known platforms such as LinkedIn and Facebook have changed the way users share and keep tabs on each other. They included messaging services in their offering and have also made the move to mobile.

There is an entire generation that has grown up with technology being an integral part of their lives. These "Digital Natives" are always connected and expect a rich blend of sharing and communication. As Smart handset technology evolves, the mobile is often the tool of choice for them. Smartphones have changed expectations of when and where to connect. As a result, subscribers have robust service expectations regardless of their device or access method.

Meanwhile, operators have been competing on price as a key differentiator. While today's messaging bundles have stimulated huge traffic volumes with massive adoption levels, messaging volume is effectively decoupled from messaging revenue. As business models continue to shift from pay-per-use to pay-to-use, messaging prices will equally continue to erode. In some cases, this is already starting to translate into lower profit margins.

Some may argue that operators are better off focusing on providing data access, contrary to also offering data services to its subscribers. However, in the past years most of these predictions have proven wrong. While promising internet messaging services such as Microsoft Live Messenger (also known as MSN) are being overtaken by new services such as Facebook Chat, others have proven to complement SMS rather than cannibalizing its volume and revenue.

In reality, revenue opportunities are plentiful if you know where to look. The mobile messaging industry is evolving at a blistering pace. As waves of change sweep the mobile data ecosystem, operators should be keenly aware that there are areas of untapped revenue potential and ample opportunities in the new world. In many cases, these challenging circumstances are opportunities in disguise.

For mass communication services there are three main fundamentals for revenue growth:

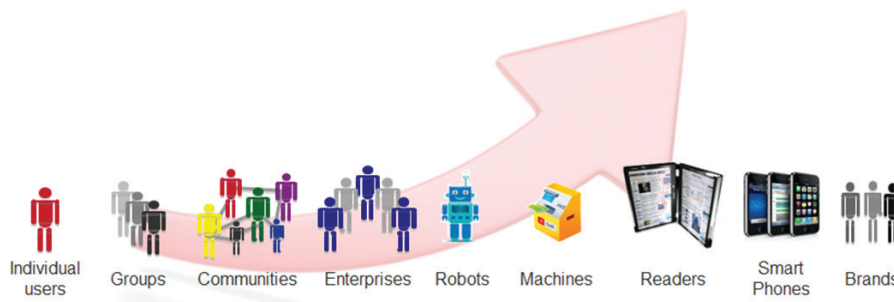
- 1. Connectivity** - Aside from SMS, any other messaging service relies on location, device/app, provider, access network or online status. A continuous effort to connect to as many users and devices as possible will assure the operator's unique value add in messaging.
To ensure that provisioning does not become a burden on the operator, Acision has developed several capabilities to enable MMS services for subscribers. These include the ability to automatically provision subscribers when they first try to send, or receive a multimedia message and to run the MMSC in a subscriberless mode whereby no provisioning of subscribers is needed.
- 2. Context** - In order to grow rather than to sustain this revenue, additional efforts have to be taken into consideration. The real value is achieved if the actual services that rely on messaging are tailored to the individual needs of the different user segments in the operator customer base.
- 3. Collaboration** - Operators have a long list of assets that offer a unique position in the mobile domain. To illustrate this with a few examples: they have a billing relationship with every customer segment, they have full control over the access network and they offer professional customer care services. Many of these assets are currently not accessible to service providers and developers outside the operator domain. Offering controlled access to some of these assets could offer a huge opportunity for operators.

Connectivity

While SMS already offers nearly total ubiquity, there is a continuous need for increasing its reach. In the past three years, we have seen a substantial rise of new mobile consumer devices such as netbooks, tablet PCs, and e-readers. At the same time, the enterprise market has been flooded with mobile connected devices such as mobile cash machines, units that remotely control the inventory of vending machines, smart meters² and even AC wall outlets with integrated phones that can switch on/off through a text message. This proliferation of mobile data consuming devices has gone hand-in-hand with a proliferation of the users operating these devices, ranging from individuals to machines.



Machine-to-machine (M2M) and connected devices are estimated³ to account for 5 to 10 percent of all cellular connections in the U.S. and in several European countries. This number may go up drastically as the amount of machine-to-machine connections is projected⁴ to increase from 61 million in 2011 to a staggering 2 billion connections in 2020. Clearly these 2 billion connections represent new types of users: robots, machines, point of sale devices, etc.



² Refer to <http://www.smsmetering.co.uk>

³ According to Tobias Ryberg, senior analyst at Berg Insight

⁴ According to Steve Hilton, head of enterprise research at Analysys Mason

The continued growth of mobile data consuming devices offers a substantial growth opportunity for operators. They will be able to sell new connections, offer existing data services against other terms and are able to differentiate by offering completely new value propositions.

The main challenge will be to ensure that the majority of these new devices will use their own network instead of their competitor's. From a messaging perspective, this requires the operator to tailor its service portfolio to meet the connectivity requirements of any user in the network:

- **Differentiate contract and type of charging** - Operators are able to turn niche examples such as the earlier mentioned 'AC wall outlets with integrated phones' into mainstream products, but simply co-selling their SIM cards as part of the product. Obviously this requires the respective SIM card to remain active even though there are no calls or text messages initiated from the card. In this case the card will generate revenues from the termination fees on received calls or SMS messages.
- **Bridge communication across messaging technologies** - As mobile networks and devices start migrating towards all-IP standards, ensuring reach requires the operator to bridge old messaging standards (SMS over SS7) with new standards (messaging over IP). This ensures improved pick-up and use of new messaging services and ensures continued use of existing services such as SMS. It also allows operators to extend their messaging business to the internet.
- **Tighten security** - The operator's network is becoming increasingly used to access and control new 'different' user types, such as industrial machinery, mobile payment systems or alarm systems. Obviously, this requires extension to the current security measures that are currently mainly aimed at preventing spam and fraud events in person-to-person communication.
- **Differentiate addressing** - As device innovation continues, it is not guaranteed that messaging and access technologies always use the same form of addressing. Addressing in SMS is based upon the user's phone number (or MSISDN) while SIP based messaging over IMS networks uses a SIP address (formatted as sip:phonenumber@operator.extension). To ensure messages can be exchanged across different technologies, address translation becomes a key challenge.

Operators that best address the points mentioned above will be more likely to connect a substantial portion of new (data consuming) devices to their network than competitors.

For a more comprehensive overview of the strategic options offered by IP Messaging, please refer to '*Opportunities in IP Messaging*' whitepaper by Acision.

Context

Consumers in today's business world intuitively understand that free services are offered with specific limitations. They also widely accept that tailored services cost more than standard services. A simple comparison can be made with suits: generally tailor made suits are sold at higher prices than ready-made suits. There is a direct relation between the relevance of a service to an individual user and the value it represents to that user.

These services contribute to increasing ARPU as well as improving customer loyalty. Based upon the various deployments of enhanced messaging solution, Acision estimates a growth potential of up to 15% on text messaging revenue.

To provide a more practical overview of service revenue opportunities, a division in typical subscriber segments (in this case for parents, teenagers, enterprises and machines) is provided. For every segment, a number of service examples are provided.

Parents

The main interests of a parent that equips his young children with a mobile phone are to prevent high costs and to ensure child safety. According to Acision research, 93% of parents would like to have more control over the messaging behavior of their children. Typically, the configurable settings related to a particular subscriber account (child) include allowing or blocking specific telephone numbers and specific time periods such as school hours or during the night. This way, parents are able to allow messaging only with a designated group or filtering content that may be threatening or offensive. The research also revealed that 83% of parents would be more likely to buy a mobile phone for their children if the operator would provide the means to control costs and safety.

Teenagers

In generic terms, the main interests of teens with regards to mobile phone usage are self-expression and entertainment. On the many platforms that teenagers use this has resulted in a range of popular features that enable this. With teenagers easily shifting from one friend group to another, it is quite common that they will be able to block contacts, a phenomenon that even got its own verb in Facebook: 'unfriending'. Another example is the ease of making plans using group chat in applications such as (again) Facebook and Windows Live Messenger (MSN). At the same time, all these messaging services and additional features have not stopped teenagers from sending more and more text messages per day. US research⁵ revealed that half of US teens send 50 or more text messages a day, or 1,500 texts a month, and one in three send more than 100 texts a day, or more than 3,000 texts a month. Clearly features such as blacklisting, group messaging and storage of valued text messages online would be of great interest to be available for SMS and MMS as well. Acision's MAVAM research in Latin America, conducted in December 2010 revealed that over 75% of respondents expressed an interest in group messaging and 79% in storing messages online for later access.

Enterprise

With text messaging being the most widely adopted data communication channel, enterprises have been looking to use the channel for a long time. A simple example that illustrates the enormous value for enterprises to use mobile messaging is that of a hospital system in the U.K. The respective hospital reduced 'failure to attend' rates by up to 75% through the use of an automated SMS reminder service. This increased effective working hours of medical staff and translated into an estimated annual savings of over £600 million. This equates the cost of running two medium sized hospitals.

Oddly enough these types of services are still regarded as a niche market and are not yet widely adopted. This is mainly due to the complexity and cost related to integrating enterprise applications to the mobile messaging channel. As a result, a new market was born for aggregators that were able to offer text volumes at a reasonable price (due to central procurement of large accounts). In many cases, these aggregators also ensured low complexity as they acted as a gateway between enterprise IT domain and the Telco environment using standards such as SMPP and UCP.

To better position operators in the enterprise market, new solutions are introduced, such as message personalisation, dialog management and common messaging API's. These solutions turn operators into enterprise mobility providers that are well positioned to turn a long list of niche services (such as the above mentioned hospital case) into mass market services.

5 Refer to <http://www.pewinternet.org/Reports/2010/Teens-and-Mobile-Phones.aspx>

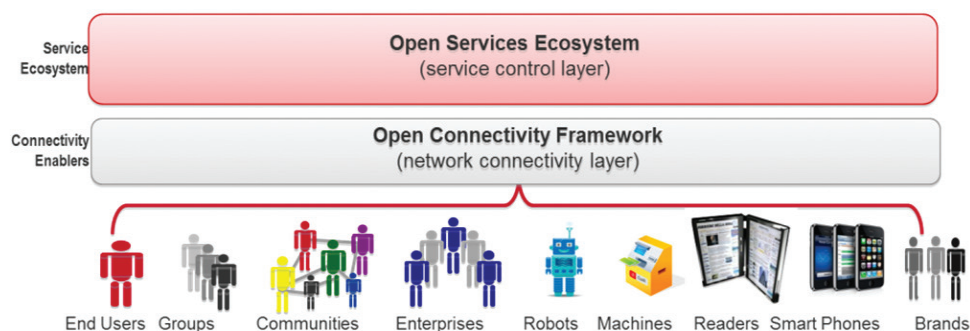
Machines

In recent years, machine-to-machine has gained substantial interest throughout the market. Aside from the before mentioned predictions of mobile connected machinery, analysts also predict prosperous growth for carrier messaging. According to research⁶ M2M messaging is projected to become a 57 billion dollar business by 2014. Even though the technology to support this has been available for a long time, the market was far too small for operators to get a return on investment on the enabling solutions. However, M2M messaging shows clear signs of becoming the next big opportunity for operators. Mainly, because messaging is now widely accepted as a reliable, cost effective channel with the potential to offer advanced and intelligent network services.

To turn this market potential into additional messaging revenue, the enabling solutions need to be put in place. At the same time, we need to acknowledge that due to margin pressures the operator market is increasingly interested in consolidation of messaging platforms, rather than increasing the complexity of their infrastructures. This means operators will have to seek for solutions that are both flexible enough to tailor services to individual needs and on the other hand robust enough to serve an ever growing list of connections and volume. According to Acision this results in a number of prerequisites that need to be met in order to introduce differentiated messaging services in a sustainable fashion:

- **Provide uniform access to key network assets** – ensure that the network can offer key enhancements to the user experience (by storing content, transcoding it, diverting it, copying it, etc).
- **Improve time-to-market** – ensure flexible and quick deployment of relevant messaging features.
- **Avoid network complexity to hamper future time-to-market** - centralise management of business rules and subscriber preferences.
- **Improve cost structure** - prevent overcomplicating the architecture by consolidating network assets (such as network connectivity, routing technology and storage).
- **Cater for growth** - ensure reliability and scalability in case differentiated services are heavily adopted.

This is generally done by splitting up solutions for network connectivity from solutions that enable the actual service. This layered approach is illustrated below.



⁶ <http://www.highbeam.com/doc/1G1-181712534.html>

Collaboration

The Internet closed the gap between developers and users. This resulted in an innovation highway that seems to speed up any technology that it crosses. In the meantime, operators have been battling each other in the less open telecommunications market.

Clearly operators have been mainly focused on creating reliable and interoperable communication services such as voice and SMS. This resulted in a global network with unrivalled levels of performance and stability. Today, many national operators served by Acision are nearing 100,000 SMS messages per second and can guarantee 99,999% uptime. At the same time well known online services such as Twitter process a few thousand messages per second and still face outages on a regular basis.

However, as these basic communication channels are maturing, it is clear that competition is moving up a level from 'quality of service' (QoS) to 'quality of experience' (QoE). Contrary to QoS, the required QoE is not predefined in an R&D lab. It will flourish through continuous interaction between user and provider.

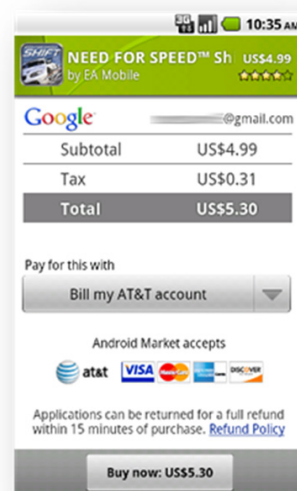
In order to truly compete on user experience, operators are well advised to take a more open approach and start collaborating with Enterprise and Internet service providers. On the one hand, this allows operators to offer services that are better designed to meet user experience requirements. On the other hand, operators will be able to offer access to unique network resources and in turn help these service providers to enhance their services.

Mobile network operators are in possession of a dynamic goldmine and may not even realise it. Mobile networks have several key capabilities that offer tremendous value if leveraged appropriately. These capabilities include presence, status, location, charging, dialogue management, identity, user/usage analytics, storage and security. In the new mobile services ecosystem, platforms enable the operator to actively explore this new business area opening up their network for developers to create new applications and services.

Opening up these capabilities and exposing them to selected partners is a crucial opportunity for operators. This new monetisation area provides many future opportunities worth exploring. The operator owns the mobile channel. As such, for the Internet and Enterprise players to be successful in mobile, they need to collaborate with operators to create a personalised experience with maximum reach.

Some innovative operators such as Telefónica, AT&T and Verizon have started to engage this opportunity. Telefónica⁷ and Verizon⁸ have both started to open up their network by providing location-, messaging- and network-based application programming interfaces to developers. AT&T recently opened up its billing interfaces to enable AT&T subscribers that use Google's Android Market to purchase new apps and get charged through their monthly AT&T bill.

Offering core network assets as a cloud service, which is what these operators are actually doing, offers opportunities for both operator and third parties. For the operator, mash-up technologies offer additional scenarios that add value to the messaging stream.



⁷ Refer to Telefonica website (<http://bit.ly/flyjfp>)

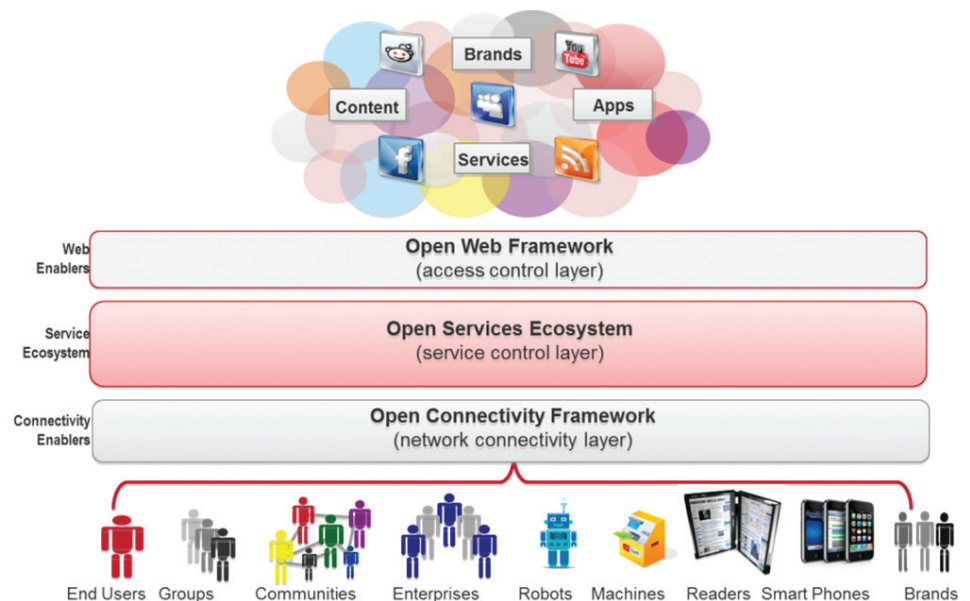
⁸ Refer to <http://www.mobilemarketer.com/cms/news/carrier-networks/7492.html>

Combining messaging infrastructure with cloud based capabilities allows the operator to launch enriched communication services. Examples of 'mash-up' services could be Tweeting in the car using voice2text Twitter deposits, inserting a LinkedIn status in SMS Out of Office replies, voicemail delivery on Facebook, vCard updates with Flickr pictures, translation of sent or received text messages into a chosen language using Google or translate and changing Facebook status by SMS. Some other examples are also described below:

- Initiating a LinkedIn invitation by sending an SMS containing the e-mail address found on a business card
- Using SMS to 'check in' at a FourSquare location
- Automatically including the senders location as a Google Maps link by acquiring the cell-id from the mobile network and translating this using Google API's
- Having text messages directly copied into your Gmail account from the network.

By opening up the unique messaging network assets, operators are able to position themselves as partner (or even supplier) for internet players, application developers and service providers. This way they will jointly create an enhanced and more valuable user experience.

To enable this, operators require an access layer that controls access between subscribers, operator services and online services. This way operators can offer a single interface for all third parties that offers access to network capabilities, resources and subscribers. At the same time, the operator is able to differentiate or restrict access in order to guarantee a certain level of performance and security. By enabling this control, the carrier will improve its ability to monetize these assets.



Summary

The mobile messaging industry is rapidly changing. The blistering pace of evolution may be threatening for many operators. However, plenty of revenue opportunities present themselves if you know where to look. In order to increase revenues, operators will have to change their focus from selling basic communication services towards offering a much broader set of consumer and business services.

The new mobile data ecosystem allows operators to provide value added services on top of and around 'basic' messaging. There are many areas of untapped revenue in this new world. In many cases, the challenging circumstances are opportunities in disguise provided by the very same effects squeezing margins and gross revenues. The three key areas where operators are able to create additional revenue are:

1. **Connectivity** - ensuring maximum reach of messaging.
2. **Context** - increasing value by focusing on the unique user context.
3. **Collaboration** - open up the network and monetize hidden network assets.

Acision's messaging platforms enable operators to address the wealth of new service and revenue opportunities described in this whitepaper, with its Data Service Architecture empowering the operator to play a central role in the changing communications context and capitalize on its unique strengths. For further information please visit our website at www.acision.com or email us at contact@acision.com.

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