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Greasing the Wheels of M-Commerce, Part 1



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"In underdeveloped markets such as the Philippines, where Internet penetration and fixed land line density is relatively low, the introduction of a nationwide cellular network coupled with the relative ease and affordability of obtaining a mobile phone has helped SMS leapfrog into the forefront of machine-to-machine communications," said Junie Agcaoili, a spokesperson for Chikka Asia.

Originally established as part of a series of the global system  for mobile communications standards in 1985, short message service, or SMS , has come to play a pivotal role not only in the evolution of personal mobile communications but in the development of m-commerce as well.

In 2006, SMS -- also known as "text-messaging" -- accounted for a large majority of total non-voice mobile service revenues worldwide, according to a Research and Markets April report.

"Of the various data services available, while attracting none of the glamor as a leading product in most [multiple [network](#) operator] service portfolios, SMS actually accounts for approximately 75 to 80 percent of non-voice service revenues worldwide," the company said.

"Mobile transactions such as SMS and Premium SMS are the fabric of mobile business," according to [mBlox](#), which lays claim to owning the world's largest mobile transaction network.

Simplicity, Speed, Scalability and Surging Use

The simplicity of SMS makes it easy to use, fast, highly flexible, scalable and cheap -- all of which have been keys to its broad adoption.

"SMS is by far the most widespread messaging technology that provides time-critical communications throughout the world. No other medium can reach over 2 billion subscribers within seconds," Steve Livingston, mBlox's chief marketing  officer, told the E-Commerce Times.

Text messaging is also the most widespread and user-friendly means of charging for mobile transactions, Livingston added.

"Each of the 2 billion subscribers has a billing relationship ... this technology can potentially tap into. This means that for content providers, the billing system is preconfigured so that all that is needed is the subscriber's authorization. PayPal, for instance, has a very respectable 100 million subscribers as a market size comparison," he said.

The vast majority of the 2 billion-plus phones in the world are SMS-capable, Livingston noted. With m-commerce now growing by leaps and bounds, mBlox has built what it claims is the world's largest mobile transaction network by focusing on "the commercial and technical complexities of mobile billing and message delivery."

The [company](#) delivers messages for [Skype](#)  to more than 170 countries each month. In terms of mobile revenues, it billed more than US\$500 million on behalf of clients during 2006, according to Livingston.

"We connect companies with customers by making it easy for companies to deliver and bill for mobile content. Through one connection with mBlox, our customers can deliver messages through 500-plus carriers rather than by contracting with each one," he noted.

Myriad Uses

There are three ways SMS is playing a role in m-commerce development, according to [Air2Web](#) chief technology officer Dale Gonzalez. One is as a method of order and point-of-sales capture.

"This is great when you have walking salespeople, because the orders can be placed automatically instead of waiting to be collected and brought back. We see people using it themselves to indicate that they are interested in taking advantage of an order," he told the E-Commerce Times.

Adding an element of spontaneous buying to Web and mobile commerce is another method.

"That notion of spontaneous buying has always been missing from Web commerce, which is very much a search and directed activity. And all of a sudden SMS is now being used to capture that spontaneous buying behavior: 'Did you know that your favorite band is in concert tonight? Do you want to hear them?' Yes. Poof, you've got the tickets," Gonzalez said.

Text-messaging is also being used as an inexpensive component of multi-factor authentication processes, he added.

"[It] is being used as a poor man's third factor in a three-factor authentication scheme. The phone becomes the 'something you have' and the SMS message with a one-time PIN (personal identification number) code that's entered into the Web site becomes the mechanism of authenticating that you really do have that phone on your person," Gonzales noted.

Big Role in Emerging Markets

SMS' attributes have made it a phenomenal success in developing economies around the world.

"In underdeveloped markets such as the Philippines, where Internet penetration and fixed land line density is relatively low, the introduction of a nationwide cellular network coupled with the relative ease and affordability of obtaining a mobile phone has helped SMS leapfrog into the forefront of machine-to-machine communications, possibly equaling those of voice and e-mail in terms of traffic," according to Junie Agcaoili, a spokesperson for [Chikka Asia](#).

Chikka three years ago licensed its patented mobile messaging technologies to V-Mobile Solutions, a specialist wireless  applications developer, which used them to pioneer the introduction of peer-to-peer load transfer of air-time credits.

This resulted in prepaid mobile air-time credit becoming a default currency, Agcaoili explained, by giving birth to "micro m-commerce, where mobile phone users would exchange load for, say, a bottle of soda. The model has since evolved to include a mobile wallet attached to a physical bank account making more sophisticated m-commerce transactions possible."

Still Growing and Evolving

What began with SMS has now evolved to include Enhanced SMS, Premium SMS and MMS (multimedia messaging system), which are likewise growing rapidly in usage.

"The obvious successor from the standard messaging perspective is MMS," Air2Web's Gonzalez commented. "It's obvious that you can do more with it. It can have a richer payload. That payload can be compressed and [encrypted](#) and all of the rest of the things that limit SMS utility."

Premium text messages are being used by companies such as mBlox as a vehicle that enables m-commerce transactions to be billed through mobile telecom service providers. The company's Premium SMS transaction volumes in the U.S. more than doubled in 2006.

"Premium SMS is a big part of our business -- and as a result of U.S. carriers charging subscribers for SMS messages, unlike their counterparts in Europe, much of the U.S. business is premium SMS," Livingston commented.

"It is increasingly the case that putting something on the carrier's bill is no longer directly connected to the SMS messaging flow," Gonzalez said. "It is now less often the case that the act of sending the SMS message is the actual billing event. Typically it's just used to indicate that a billing event has occurred.

In comparison to SMS-based billing relationships with carriers, most non-SMS ones are Web services and HTTP-based proprietary protocols that people use to transact with something that is on the carrier site, Gonzalez explained.

"In the early days, these things were a nightmare. They were very difficult to use. They often failed for reasons that were unclear to anyone. They ran afoul of odd set-up and configuration problems inside the carriers. But in our experience, most of these things have been resolved," he added.

In addition, mobile messaging and non-messaging-oriented channels are being brought together as a way of finalizing transactions, Gonzalez explained.

"Messaging will probably always be used as a way to notify someone that there's an opportunity to conduct commerce. But increasingly it's the case that once that notification has occurred, something like a WAP  (wireless application protocol) portal which has a well-known security profile is used to finalize the transaction." **ECT**

Greasing the Wheels of M-Commerce, Part 2

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