

The Basics of SMS Messaging

Introduction to SMS

Short Message Service, better known as SMS or text messaging, is a telecommunications service that allows the sending of short (160 characters or less) text-based messages between mobile phones. SMS is generally available on all wireless networks globally and can reach virtually all of the 4 billion mobile phones in use today, making it the world's most pervasive data communications technology.

SMS messages can be typically sent and received within seconds throughout the world. And with more than 1 trillion SMS messages sent in 2009 in the US alone, volumes are widely forecast to continue their strong growth rate globally for years to come.

SMS offers businesses a compelling communication channel for effective, two-way interaction with customers and prospects. It can extend brand awareness, create customer loyalty and deliver timely content or critical information, providing the immediacy and interactivity no other medium can offer. Attracted by the unique characteristics offered by SMS, businesses are increasingly utilizing the anytime, anywhere mobile channel as part of a multichannel communication strategy.

Types of SMS

Person-to-Person (P2P) and Application-to-Person (A2P) are the two categories of SMS messages. While P2P messages connect one individual to another, A2P messages are used by companies that want to interact with consumers via an SMS application. This document deals solely with A2P messaging.

Standard Rate SMS

Standard rate mobile messaging services (also known as bulk SMS) allow companies to send quantities of SMS quickly and efficiently. Generally, text messaging charges are not applied to the mobile subscriber's wireless bill or deducted from a subscriber's messaging plan allowance when they receive messages from an application (known as Mobile Terminated, or MT, messages). However, text messaging charges do apply when they send messages from their phone to an application (known as Mobile Originated, or MO, messages). An exception to this is found in the US and Canada, where many mobile operators charge for both sending and receiving text messages.

Premium SMS (PSMS)

Premium SMS is used by businesses that want to charge their consumers for content or services using the mobile channel. A simple text message can be used as a payment method for digital goods that are typically consumed on the handset and services such as purchasing a bus ticket or paying a parking fee. A fee, connected to the sending of the text message, is charged to the consumer's monthly mobile phone bill or deducted from their pre-pay account, providing a simple, frictionless payment method. The mobile operator requires the business to share the revenue generated by this transaction.

Free to End User SMS (FTEU)

In countries, such as the US, where mobile subscribers pay network operator charges to both send and receive SMS messages, FTEU messaging allows businesses to set up programs that are free of operator charges for their consumers. The business absorbs the messaging cost on behalf of the consumer - whether sending or receiving SMS messages, the consumer pays nothing.

Short Codes, Long Numbers and Keywords

Common Short Codes, also known simply as “short codes,” are abbreviated mobile phone numbers, usually four to six digits, used as a destination address for two way text messaging programs. Short codes are easy to input and remember, providing a fast and convenient way for mobile users to interact with a business application using SMS. Short codes are always used for premium SMS services, but can also be used for standard rate SMS services. In some markets, including the US and Canada, the use of short codes is mandated for all types of A2P messaging.

Businesses are using short codes to successfully engage consumers via mobile advertising and marketing promotions. For example, an advertisement may instruct mobile subscribers to text to “46322” (which spells ‘4Free’ on a handset keypad) to enter a contest to win a free prize. Short codes are widely used for value-added mobile services such as traffic, weather, sports, banking, and charity donations.

As an alternative to short codes, businesses can use a long number as the destination address in a two way messaging program. A long number is a standard mobile telephone number that conforms to the numbering system in the relevant country. Using a long number has some advantages for A2P messaging programs. Long numbers are less expensive and easier to lease than short codes and can receive A2P messages from outside the country in which the phone is hosted (in exactly the same way as individuals can text each other internationally). Also, because they are standard phone numbers, they can be voice-enabled.

Keywords are often used in conjunction with short codes and long numbers in two-way messaging programs. A keyword is a short word which a mobile user places at the beginning of an MO SMS message, which triggers a particular response from the application that receives the message. For example, a banking client could use the key word “bal” sent to the short code “12345” that will provide a return text message from the bank with their current banking balances.

Some types of messaging programs may only require a one way communication to the consumer, in which case neither a short code nor a long number is necessary. The originator of the message (the “number” it appears to come from) can be set to an alphanumeric string, such as a brand name. The consumer cannot reply to this type of message.

Short codes operate at a national level and are provided and managed by a separate ecosystem of companies in each country. These include the Common Short Code Administration (CSCA) in the US (or similar organizations in other countries) and participating mobile operators. Processes vary by country, but in general short codes are leased centrally and then must be provisioned separately on each on each operator.

Travelling and SMS

A2P messaging programs often send messages to people who are travelling outside of their home country. These messages will most often still be delivered to the intended recipient, even when they are travelling abroad. However, in most cases an MO message, or response from the mobile phone, cannot be returned via short code because short codes are specific to the country in which they are administered and would not be accurately recognized by the international operator. However, long numbers would work because they are standard phone numbers.



MTN services may include:

- Technical on-boarding integration support
- Administration of short code and long number leasing and provisioning
- Carrier and handset certification consulting and support
- Global connectivity and expansion assistance
- Carrier management and regulatory support
- 24X7 problem detection and reporting

Guidelines & Regulations

Guidelines, regulations, and enforcement agencies vary by country and region. In the US for example, the Mobile Marketing Association (MMA) publishes a set of Consumer Best Practices, the recognized industry guide to implementing short code programs, with a focus on consumer protection and privacy. It is a compilation of accepted industry practices, wireless carrier policies, and regulatory guidance that have been agreed upon by representative member companies from all parts of the ecosystem. In addition to these guidelines, specific regulations may also be enforced by each US network operator. It is best to work with an MTN to ensure compliance when creating messaging programs in each geographical location.

Managing SMS Internationally

In today's global market place, many businesses need to expand communications beyond their home shores. Due to the simplicity, reach, and universal adoption of SMS, it has become a uniquely global communication channel. Using an MTN with global reach allows many SMS programs to be easily deployed in multiple countries, leveraging systems already developed, saving money and decreasing time to market.

For a smooth launch into international markets, businesses need to be aware of local regulatory and operator requirements, and administrative processes such as short code registration and program certification. An experienced global MTN, who works with numerous operators and Application Providers, can offer full guidance on local markets.

About mBlox

mBlox is the world's largest *mobile transaction network*. We are in the business of connecting companies with customers. The mBlox network enables businesses to deliver mobile services and content around the world and bill for them. Founded in 1999, we maintain connections to over 600 mobile operators in 180+ countries through our carrier-grade network. For more information, please visit: www.mblox.com

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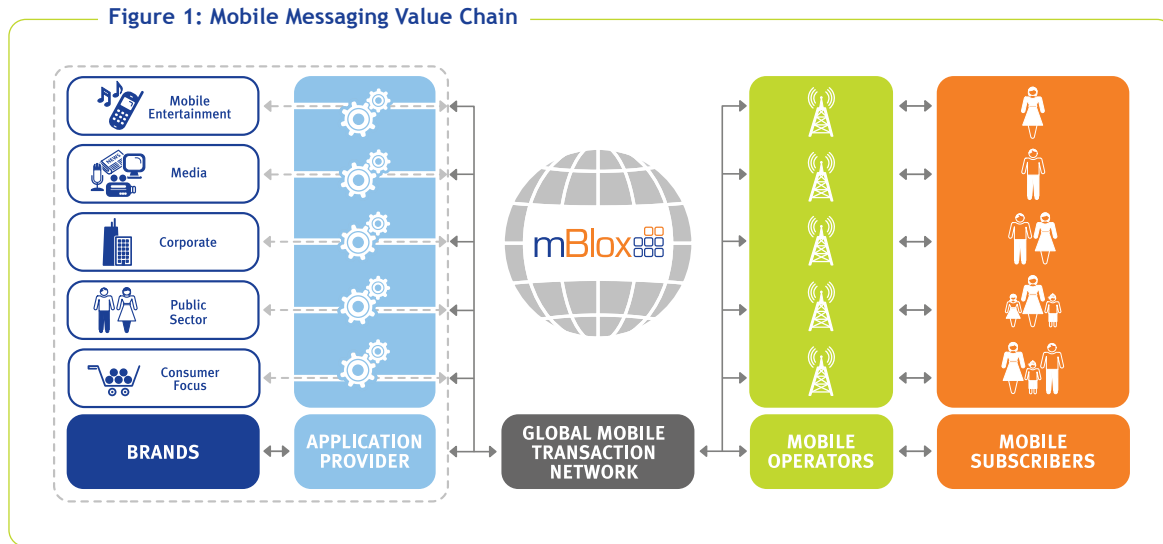
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Mobile Messaging Value Chain

Many stakeholders are involved in the implementation of a complete mobile messaging program. Figure 1 shows how each of these members of the messaging value chain interact with one another.



Application Providers and the Mobile Transaction Network (commonly referred to as an aggregator) often work in partnership to provide the complete mobile messaging solution for brands who wish to connect to their customers or prospects. Each specializes in their areas of expertise, together providing a best-in-class mobile messaging solution.

Role of a Mobile Application Provider

An Application Provider typically builds the system that enables brands to communicate via the mobile channel by packaging different components of the mobile experience. These systems include SMS, mobile internet, and downloadable applications which are integrated into the brands' existing systems, such as CRM, call center applications or banking back office systems. Often specializing by industry, they provide mobile services expertise at a lower cost and reduced risk than having businesses attempt to build the capability in house.

Application Provider services may include:

- Development of custom applications
- Leading-edge services and market intelligence
- System monitoring
- Diagnostics and fault resolution
- User support
- Content formatting for various devices

Role of a Mobile Transaction Network (MTN)

The role of a Mobile Transaction Network is to simplify the task of creating and maintaining connections to mobile operators. An MTN operates the network infrastructure on which messages are passed on a mass scale between business applications and mobile operators, providing a single technical and commercial interface to access dozens, or even hundreds, of operators and billions of consumers. An MTN also leverages its scale and buying power to provide a messaging cost advantage to its customers.

MTNs with global connections have expertise with multiple networking technologies and varying local market environments. They can provide the local knowledge to navigate operator-specific administrative and legal requirements in order to launch successful mobile programs in a timely manner. An experienced MTN builds and maintains relationships and direct connections to operators throughout the world. For these reasons, mobile operators typically do not connect directly with content providers, brands or Application Providers, and instead rely on the services that an MTN provides.