

# The Future of SMS

## Empower Interactive Group

This white paper is intended to:

- Clarify the SMS service offered by GSM operators worldwide
- Highlight the explosive volumes of SMS traffic
- Explain the value of SMS to a wider audience
- Suggest types of services that can be offered using SMS

SMS, the abbreviation for the short message service available on GSM mobile phones throughout the world, has lately been receiving more presence in wireless Internet discussions. Until now, its explosive growth and multi-purpose functionality have languished outside of the spotlight that has been cast on other mobile Internet services, including WAP and the 3G spectrum auctions. **Why has this service, with such compelling actual statistics to support its usefulness, not gotten the respect it deserves? More importantly, how can you take advantage of its simplicity and worldwide standardization?**

### Understanding the SMS Service

Before discussing why SMS has not been widely recognized as a substantial revenue source until recently, it helps to take a brief look at the history of how the service is operated and how it started.

The SMS service is actually a network of SMS Centers that are connected to each other and can interchange messages. The SMS Centers are specially written software packages that can send and receive messages to and from mobile phones, can receive messages from the Internet, and can send and receive messages to and from each other. SMS Centers are owned by telecom companies that want to offer SMS services to their customers.

The software for the SMS Centers is designed and developed by specialist IT companies including Logica, CMG, Nokia, and Sema. The SMS business is a key part of their profitability. In fact, just recently, some of these companies issued their periodic financial reports and the majority of their profit growth came from their SMS divisions. It is not hard to understand why, when you realize that the list price of one of these SMSCs is in the 1-3 million dollar range. If every GSM operator in the world (> 250 operators) needs one or more of these SMSCs, plus custom services and upgrades, the dollars start adding up.

If these software companies can sell millions of dollars of software around the world, then there must be a compelling revenue source on the other side. There is. The volume numbers for SMS services have exploded over the course of the last year. Currently upwards of 10 billion messages a month are sent globally using the SMS service (see chart). Mobile operators charge from 2p to 1 pound for each message sent. 10p is a pretty standard charge. That equals 1 billion pounds a month. How can a market of this size go underappreciated?

The reason lies in the fact that only recently has the service been truly global. Before 1998, most services were limited to the mobile operator network only. Mobile users could only send messages to other users of the same network. Clearly, that is a very limited service offering. GSM operators at that time began to negotiate peering agreements that would permit the SMSCs to send messages to each other when the users were on different networks. Once these agreements were in place the service multiplied in reach dramatically.

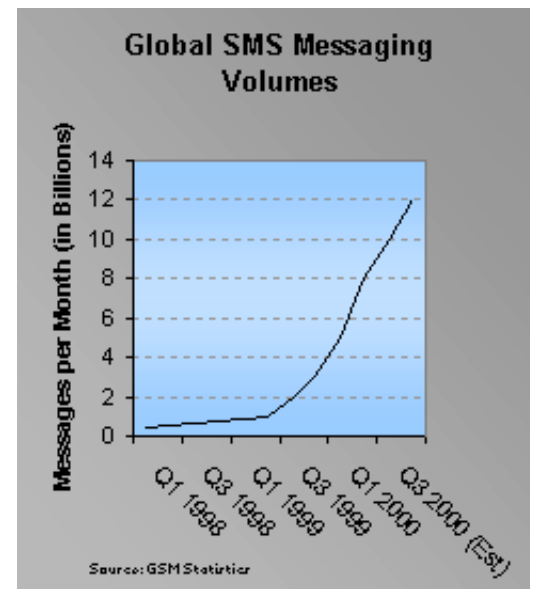
Also, until recently, text messaging was associated with children and students, mainly because the cost of messaging was much cheaper than the cost of voice calls. As more people began to get messages though, especially messages alerting them of new voicemail, they began to understand the non-intrusive, but highly pertinent and time-sensitive information that could be received (and also stored in memory) using SMS.

Volumes as recently as February 1999 were as little as 10% of where they are now. As people became more comfortable with the service the usage of it soared. Simple applications were deployed, including e-mail notification, information services (lottery numbers, sports scores, etc.), and other time-sensitive applications. Most of these services were deployed by the telecom operators themselves.

### Understanding how to use SMS to deliver services

That brings us almost to the present. Given the low volumes and the unappealing image with the initial service, SMS was widely ignored, and its potential was widely underestimated. Clearly, though, over the last year its potential has just begun to be understood. Telecom operators provide the service and are making a substantial amount of money from operating it and providing simple services. SMSC manufacturers provide the software to run the service and are making a substantial amount of money from licensing, support, and further development. **How can you take advantage of SMS to generate more income, provide more services, or access more customers?** The answer lies in the design of the SMSC.

As mentioned above, the SMSC can send and receive messages to and from mobile phones, send and receive messages to each other, and can receive messages from the Internet. The SMSC can receive messages from the Internet. Think about that. You can send messages to a mobile phone via the Internet. Maybe you have already seen some services that allow you to type in a message and a phone number and it is delivered to the phone almost instantly. That is one part of the answer.



**How do you send messages to an SMSC? Why would you send messages to an SMSC, even if you could?**

The answer to the first question can be one of three potential choices:

- Develop a static application that talks to one SMSC
- Send your messages to a Service Provider that is connected to various SMSCs
- Install a messaging application that talks to all of the SMSCs.

The five main factors in choosing one of the above options are:

- upfront cost
- operating costs
- flexibility
- internal IT resource
- quality of service desired.

As you can see from the table on the following page, the first option is not economical in any circumstance given that it costs more to develop the static application than it would to connect it directly to a Service Provider. The only real decision comes when determining messaging volumes and required quality of service. Given that the startup cost is so low for the Service Provider, there is little harm in trialling a service using a Service Provider and if a superior level of service is required, a Messaging Platform or Gateway can be installed later.

**Analysis of External Methods for Connecting to SMSC**

Option	IT Resource Needed	Upfront Cost	Operating Costs	Flexibility	Quality of Service
Develop a Static App that talks to one SMSC	Application Developer with SMSC Protocol experience  Internet connection to SMSC	Application Development Time - including SMSC Protocol communication  Connection to SMSC (200-2500 GBP)	Per message charge from SMSC operator	One SMSC One Application	Only good for low volumes of messages  Not appropriate for timely distribution of information
Send messages to Service Provider that is connected to various SMSCs	Application Developer No SMSC Protocol experience needed  Internet connection to Service Provider	Application Development Time (no SMSC Protocol development necessary)  Startup fees from Service Provider (0-200 GBP)	Periodic subscription fee (0-200 pounds)  Per msg charge from Service Provider (who buys msgs from various SMSC ops)	Simple connection via Internet  Can develop multiple apps using same service  More connections to different SMSCs	Subject to service provider  Appropriate for medium volume of messages  Appropriate for trial services
Install a Messaging	Application Developer  No SMSC Protocol experience needed	Application Development Time (no SMSC Protocol development necessary)	Per message charge from	Multiple Applications  Multiple SMSCs  Load Balancing  Search for cheapest per message	Subject to quality of software  Appropriate for medium to very high volume of

App that talks to all SMSCs	Internet connection to as many SMSCs as desired	Software Cost (10,000-100,000 GBP)  SMSC Connections (200-2500 GBP each)	SMSC operators	SMSC  Full control over connectivity  Ability to negotiate cost discounts from SMSC ops	messages  Appropriate for time-sensitive, highly pertinent messages.
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### Types of services to offer via SMS

The second question asks why someone would want to send messages to an SMSC. We left the history of the SMS market in mid-1999 where mobile operators begin to offer simple services over the phone. Email notifications, sports results, lottery results, and other relatively straightforward services lend themselves naturally to SMS. Now that you can connect directly to the SMSC via the Internet, you can extend any service you already provide to the SMS channel. You can also create services based around the fact that you can access users directly on their mobile phones with timely, relevant, and pertinent information. You can also do this cheaply to start with by trialling the new addition or new services via a Service Provider.

**What sorts of services should you offer?** There are six main types of services, but that does not mean that there are not many more variations on the theme of timely, relevant information delivered directly to the user. The six "SMS" types are:

- **Send Me Stories**
- **Save Me Somehow**
- **Search My Server**
- **Sell Me Something**
- **Sort My Socializing**
- **Send Me Signals**

Word games aside, by reading the following discussions of services to offer, you should be able to come up with appropriate uses of SMS in regards to your own service.

Before we get into the types of services, there is a very important concept to take into account. This is the potential for unwanted messages, otherwise known as 'Spam'. The sanctity of the mobile phone as a personal communication tool is occasionally violated if the phone is lost or the number falls into the hands of an unwanted, persistent suitor. Aside from that, the mobile is predominantly unintrusive (loud ring tones aside) and does not permit violation of personal privacy. As the SMS service becomes widely available to third party messaging providers offering all sorts of services, the potential for invasion of privacy increases dramatically. Take the case of e-mail; in its early stages the volume of unsolicited mail had the potential to grow out of control. Self-regulation and common sense has prevented that. Given that example, the mobile Internet and SMS should follow a similar path. That depends partly on the level of restraint shown by new service providers. Take that into account when developing new services, realizing that by intruding on personal privacy, you reduce the value and effectiveness of the service for everyone.

**Now, what type of service should you offer your customers, clients, employees, or target demographic?** A discussion of each type follows below.

**Send me Stories** - One of the original SMS services launched was in Finland. It was a daily Blonde joke. Now, while getting jokes and fun stories might not be interesting to most users, getting news stories might be. Especially if those stories were highly relevant to the user and very time sensitive. Depending on the type of news or content you generate, determining what the user wants to see is a task best left to the user. Making as much available to the user as possible is the task of the content provider. Again, this service can be adapted to the employees of a content-sensitive business where employees are often on the road and information changes rapidly.

**Save me Somehow** - This category falls into two types. Save me money and save my relationship. You can save users money by sending coupons to registered users that can be redeemed for a limited period of time at local stores or local branches of your store. You can save a users relationship by tracking and reminding him of his important events either as a personal service, or perhaps start a service for your mobile employees keeping them in touch with important appointments or information such as updated client info or newly issued research.

**Search my Server** - Giving employees or customers of an information management service the ability to look at, search, and send information to another location (fax, email, another client), enables mobility to a substantial degree. The added flexibility of being able to distribute reports while on the move would be a valuable asset for most information sensitive firms and services.

**Sell me Something** - The spectre of wireless advertising begins to loom large. Time-based offers will be the first ones developed and as location tracking becomes widely available, the combination of time and location will prove very compelling in offering products or services to the consumer. How do you get the consumer interested though? Give them discounts to sign up to your service. This gets them to agree to be sent occasional messages (be very specific about how many you intend to send), and it also increases customer retention through increased visibility.

**Sort my Socializing** - Setting up a messaging service that allows groups of users to communicate amongst themselves will allow for a very useful, very inexpensive way to plan for big events or make changes to plans if something has gone wrong. By using buddy lists and ensuring compatibility with the internet messaging facilities (e-mail and ICQ), a full service offering can be provided that will keep people in touch with their social lives. This type of application can be easily modified to work in a corporate environment where groups of people are mobile and need to be in close contact.

**Send me Signals** - Long-term investors do not need to check their portfolio holdings throughout the day. They do need to know when

something big is happening though. Providing them a service to track their holdings and sending them alerts when something major is happening will allow clients a further level of comfort knowing that their finances are being monitored 24 hours a day.

### **Closing Thoughts**

We have discussed SMS and its origins. We have clarified why it has only recently been understood for its true potential. We have demonstrated how you can take advantage of this over the Internet. Finally, we have described types of services you might offer your clients or employees using SMS. The decision rests with you, are you going to wait and watch the growth explode like the Internet did, or are you going to take advantage of the potential before the competition?

### **About Empower Interactive**

Empower Interactive is a wireless software infrastructure firm. Empower has been designing software and creating customized solutions for its clients and partners since 1999. Founded by a team of financial professionals and software architects with extensive development experience, Empower has positioned itself to provide wireless software solutions. The software development experience it has gained from operating in a highly transactional and mission-critical arena has been applied across a variety of industries with considerable success.

Empower offers SMS software designed to meet the needs of high volume, time-sensitive, and location-sensitive messaging clients or service providers. Empower also acts a Service Provider by offering a hosted SMS service for messaging clients that want to trial services with little upfront risk in terms of cost and speed-to-market. For more information contact Ed Gildar, Director of Business Development on +44 (0) 207 920 9400 or e-mail at [ed@eigroup.com](mailto:ed@eigroup.com). Information is also available from [www.eigroup.com](http://www.eigroup.com).