

Increasing Carrier Messaging Revenues

a report by

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The Current Situation

Despite the promises of 2.5G and 3G networks, carriers need increased revenue from the infrastructure they already have. Looking forward, carriers want to ensure that revenues continue to improve as they rollout those 2.5G and 3G networks.

Carriers in Europe and North America are faced with the following:

- significant debt;
- flattening wireless voice revenues;
- data revenues that are still just emergent; and
- near saturation of subscriber penetration in most markets.

Sources of relatively easy revenue for wireless carriers would be a welcome change from unproven business models that require still more investments. Part of the answer may be to increase the adoption and use of data services today – without requiring additional investment.

A Short-term Solution

In the short term, the most obvious source for an immediate revenue increase for carriers is from messaging, more specifically, from short message service (SMS) messaging. A recent study by the Yankee Group shows that messaging is the number-one generator of data revenues now and in the next few years, and holds the key for carriers to increase average revenue per user (ARPU).

SMS has been a proven business model in Europe for the past 10 years, where it generates 10% to 25% of total carrier revenue, and 26% in the Philippines. The GSM Association estimates that SMS added US\$10 billion of revenue to European carriers in 2001.

The rate of SMS/text messages sent via GSM™ mobile phones worldwide is now 24 billion messages/month, an increase of 342% from May 2000 to May 2002 (see *Figure 1*).

The Untapped Market

To date, the use of SMS in Europe is primarily in the youth market. A recent study by Phones 4u in the UK – where all mobile phones have text-messaging capabilities – discovered that 83% of persons over 45 years of age had never sent a text message on their phones, yet 67% would like to. In the US, however, Research in Motion provides the BlackBerry™ wireless platform device and a messaging service that is extremely popular with adult business users (the penetration in the US for this service is approximately 403,000 subscribers to date).

What is the lesson as to why messaging is popular among adults in one market and used so little in another market? The primary reason is the user input interface. ‘Triple-tapping’ text entries on a telephone keypad is awkward, time-consuming and frustrating, whereas the BlackBerry provides a better keyboard.

Even basic phone tasks, such as entering the names and numbers of people frequently called, is kept to a minimum by most users because triple-tapping even a few names into a mobile phone address book is awkward and frustrating.

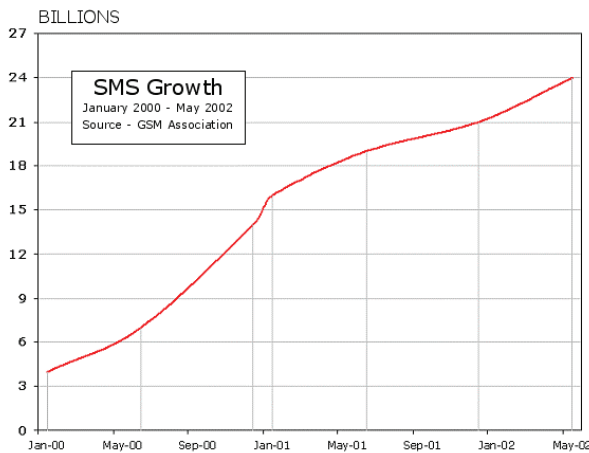
Further, there are now hints that triple-tapping may even be hazardous to health, as repetitive stress injuries can occur from triple tapping on mobile phone keypads. Finding a method of reducing the number of keystrokes necessary to perform tasks on a mobile phone would be a major improvement for users.

The Problem

The standard 12-button mobile phone interface is almost half a century old (the Bell Laboratories technical paper describing it first appeared in January 1960; the patents were earlier). It was not designed for complex tasks like entering text messages, browsing the mobile Internet, or performing m-commerce functions. Rotary-dial telephones had the letters placed on the telephone dial to help people remember the telephone exchange prefix that they had to dial, but those letters on the telephone dial were never envisioned to be used 50 years later for entering text.



Figure 1: SMS Growth



Jack Gold, an analyst with the Meta Group, said recently: "The big hitch is that inputting data into today's wireless devices is tedious."

Interface Advance Required

The personal computer (PC) revolution of the past 15 years has accustomed us to using keyboards for text entry. Triple-tapping into a mobile phone is reminiscent of the days of the DOS operating system, when engineers were proud of how many arcane commands such as 'control-shift-3' they had mastered. Anyone who had access to an Apple Macintosh computer with its simple desktop icons, 'drag-and-drop' and 'push-and-click' with its mouse interface, found it difficult reverting to DOS. Today, only UNIX programmers use a command-line interface. The rest of the world uses the mouse and an iconic desktop, and even technician programmers now program in so-called 'visual languages' that have adopted a similar 'drag-and-drop' philosophy. Product interfaces improve continually, except, it appears, with mobile phones. With mobile phones, SMS users are still developing cryptic abbreviations to bypass the frustration of typing out complete words (such as CUL for 'see you later').

Donald Norman, author of *The Design of Everyday Things*, states that whenever a control or button has multiple functions, it is bound to cause confusion with the user. With four characters on each key (three alpha and one numeric) the telephone keypad is not at all intuitive, and not at all easy to operate. In fact, the traditional 12-button telephone keypad is simply an inappropriate interface to computer functionalities such as messaging, Web-browsing, and m-commerce. If in any doubt, replace your desktop keyboard with a 12-button keypad and see how many e-mails you write.

The telephone interface is ready for a change.

The Input Problem Solved for SMS

The Fastap™ keypad is a new design that returns us to the familiar paradigm of 'one key equals one character.' The invention is from Dr David Levy, a former ergonomic guru with Apple Computer. Dr Levy already has two major user interface improvements with nearly universal adoption to his credit (the 'wrist shelf' at the front of laptop PC keyboards, and the use of the trackpad as a laptop mouse). Dr Levy's new invention is a simple, elegant, and intuitive interface for mobile phones that allows for direct text entry without triple-tapping. The design is protected by two issued and 16 pending patents. Manufacturing licences are being issued to mobile phone manufacturers now, and phones equipped with Fastap will be available in the near future.

What does this Fastap keypad design mean for wireless carriers? Instead of an SMS market limited to youth and a few dedicated technophiles, Fastap technology makes messaging attractive to every wireless customer. Ease-of-use equals use.

The GSM Association estimated that SMS use would increase 25% just from the use of predictive software to improve the user experience in text entry. When a more familiar one key/one character interface such as Fastap keypad is introduced into mobile phones, how much more of an increase in SMS revenues can carriers expect from adult and business users? Will this represent another 25% or 50% increase? With the SMS infrastructure already in place in Europe and North America, the majority of whatever SMS revenue increase occurs will flow straight to the carriers' bottom line. In addition, the benefits extend beyond just increases in SMS use.

Revenue Benefits Beyond SMS

The Fastap technology is a fundamentally enabling technology. It empowers the business models of carriers, third-party applications and service providers and handset manufacturers, by providing an easier to use text entry input interface. Fastap phones will provide the opportunity to grow from 2 G, to 2.5G and then to 3G, and prepare the way for more lucrative carrier offerings that increase ARPU while decreasing cost per gross addition (CPGA) and churn. Our return-on-investment calculations indicate that, with an improved phone text interface, carriers can enjoy improvements of US\$240 to US\$342 per subscriber lifetime because of increased data and messaging revenues.

Increased ARPU

- Increased revenues from data and messaging services such as enhanced messaging service

(EMS), multimedia messaging service (MMS), and instant messaging (IM) as they are introduced.

- Increased use of minute-intensive business applications such as customer relationship management (CRM) and sales force automation.
- Increased use of m-commerce.
- The ability to provide new m-commerce, service and applications offerings that interact with the subscriber in a more compelling way, and that generate new revenue streams (e.g. revenues from dedicated portal keys on the phone keypad.).

Decreased Churn

The ability to compete on attributes other than price:

- Targeted service offerings to specific subscriber demographics: youth, business, Hispanic handsets in the US.
- New applications and services: text-intensive applications such as CRM, calendaring, certain games and form filling.
- The ability to meet the needs of important market segments such as the disabled. (Fastap phones will enhance the ability of US carriers to meet the new US Federal Communications Commission (FCC) Section 255 requirements).
- The ability to offer phones that operate in different languages.

Decreased CPGA

- The ability to reduce or eliminate subsidies on mobile phones (now averaging US\$100 per subscriber in the US). The new Fastap-equipped phones offer improved functionality and, as a result, customers are willing to pay more for these phones and early market research bears this out. Due to the innate demand, such phones can be offered at reduced or no subsidies.
- The Fastap keypad can reflect the signature look and feel of the handset and make the handset more attractive to certain target market segments, so that the phone 'sells itself'.

Market research indicates that subscribers prefer phones with the Fastap keypad. The company has performed four market research surveys using an early version of the Fastap keypad. A total of 264 users were surveyed in the UK and the US, both youth and business users, and the surveys were conducted in mid 2001 and mid 2002. The results were consistently positive:

- When asked if the characters were easy to find, 82% to 84% said that they found them immediately.
- 86% to 94% of respondents could see themselves using Fastap to type messages on a mobile phone.
- 73% to 81% of respondents would be likely to buy a Fastap phone and pay at least a US\$28 premium for the phone. This is a 30% premium over the price of their current or new phone.
- Users predicted that they will send at least 28% more SMS messages if they had a Fastap phone.

The Fastap interface is distinctive and consumers perceive it as being a new and exciting type of phone.

The Fastap keypad design is generic, and it has many design configurations possible in key layout, button technologies, tactile feedback, materials, colours, etc. As a result, handset manufacturers will be able to provide carriers with a wide array of phones using the Fastap technology: backlit keypads, buttons with high tactile feedback for high-end phones, water-resistant keypads for sports phones, brightly coloured keypads for the youth market, a data/personal digital assistant phone with a QWERTY or European keyboard layout for business power users, etc.

The Time is Now

Messaging is no doubt already a part of your revenue plan. Messaging will be a larger part of your revenues if subscribers have a more compelling interface for entering text. Youth will send more messages, and adults and business users will find many reasons to message if the interface is simple and intuitive to use. Adding Fastap-equipped handsets to your system does not require any infrastructure changes. Andy Seybold has said: "The keyboard will be one of the most important drivers of wireless data services."

Several mobile phone manufacturers are adopting the Fastap keypad into their future handset offerings. Ask your favourite original equipment manufacturer handset suppliers how soon you can obtain phones for market trials. Do not allow your subscribers to be churned away by a competing operator who begins to implement Fastap phones before you do.

The revenue opportunities are now, with Fastap-equipped phones.■

A version of this paper is available on the Digit Wireless website with references and appendix.

<http://www.digitwireless.com>