A purely technical segmentation of the mobile phone market is no longer appropriate. Today, usage benefits are more important than technological performance and the generalization of mobile phones has complicated the market typology. Most mobile phone users expect a different language.
Consumer behavior is becoming more relevant than technology when it comes to understanding future evolution in the mobile phone market.

Introduction

The mobile phone phenomenon is unique in the histories of both the telecommunication and consumer electronics markets. In less than a decade, people have adopted mobile phones on a massive scale, as a result of which yearly global handset production will probably exceed a record of 450 million units in 2003. This is about three times the size of the television or PC markets. Growth has been fueled by the spectacular evolution of mobile phone technologies, both in terms of performance and miniaturization. As a result, unlike many other appliances, users change their mobile phones on average every two years. Consequently, replacement handsets today represent about 80% of all mobile phone purchases.

Currently, several families of standards coexist: Global System for Mobile communication (GSM), Code Division Multiple Access (CDMA), Time Division Multiple Access (TDMA) and Personal Digital Cellular (PDC). There is not yet a “universal mobile phone”. In addition, each standard offers an endless range of features. The difficulties are compounded by the fact that different manufacturers and mobile operators do not always refer to features and services by the same name, although they may well appear similar to the users. Therefore, trying to describe the market using a purely technical approach is not only complicated, but also irrelevant when it comes to understanding its drivers and inhibitors. Explaining user behavior has become a key issue for all mobile phone players: manufacturers, operators and service providers. Most users are now experienced, having used a mobile phone for an average of 31 months.

As discussed here, a consumer-based marketing segmentation is becoming more appropriate in the mobile phone market.

Usage Benefits are More Important than Technical Performance

Recent years have proved that in the mobile communication world technological innovation can either leave users totally disinterested, or lead to amazing market success. Two cases that epitomize these extremes are the failure of the Wireless Application Protocol (WAP) mobile Internet service and the boom in Short Message Service (SMS) text messages.

In 1999, the major players involved in the GSM market were preparing for a predicted “mobile revolution” that would bring the Internet to every one’s pocket. The promise was strong. Users were offered the ability to...
browse the Internet from their mobile phones anywhere at anytime. Manufacturers and operators made enormous efforts to implement this new feature, which resulted from extensive standardization work in the WAP Forum. It required phones to implement new ergonomic features, such as soft keys, larger screens and specific scrolling systems.

At that time, mobile operators were enthused by NTT DoCoMo’s success with I-mode, the Japanese mobile Internet service, and therefore demanded that manufacturers provide a wide range of products with WAP capabilities. Almost everything was done to ensure that the technology was widely available, easy to use and with an understandable billing system. Nevertheless, in 2002, some three years after the introduction of the first WAP phone, only 5% of GSM users had ever tried WAP [1]. Why?

Three major marketing aspects had been neglected. First, from a billing perspective, users were used to accessing the Internet for nothing using their PCs, whereas WAP was quite expensive. Second, the perceived quality and quantity of information that could be displayed on a small black and white screen were poor compared with a computer screen. Third, the success of I-mode was built on messaging, which represented (and still does today) more than 40% of usage (see Figure 1). All in all, few consumers were ready to adopt a technology that would have pushed their mobile phone usage outside the personal communication arena.

The success of SMS has clearly shown that mobile technologies can create great value if they build on established usage. In December 2002, according to the GSM association some 30 billion SMS messages were sent worldwide, compared with just four billion during the same month three years previously. Today, around 78% of mobile phone users with SMS-capable handsets use the service, with each user sending 15 messages per week, on average [2].

SMS combines all the elements for consumer success. Above all it is a simple technology, addressing a simple need: the exchange of 160 character written messages from one mobile phone to another. This feature has been implemented on almost every GSM phone from the beginning, with the result that there is now a very large installed base of SMS-enabled phones. Once the issue of interoperability between operators was resolved in 1999, the market took off. Although operators did not invest heavily to support the marketing launch of SMS, it quickly became their main source of data revenues and a sociological phenomenon, particularly among young people. Today, 97% of younger users (15 to 24 years old) use SMS, each sending 24 messages a week [2]. This has been boosted by the use of SMS as a medium for voting in major TV shows. In addition, the billing of SMS has always been easily understood by users who pay a fee for each message sent.

These two examples demonstrate that consumers adopt new features primarily because of the usage benefits rather than because of their technological performance. If this is the case, what is the role of technology in the mobile handset market segmentation?

**Generalization of Mobile Phones has Complicated the Market Segmentation**

Cellular technologies gave birth to the fastest growing consumer market ever. Not surprisingly, the market segmentation has changed at the same pace. At first the problem was simple because mobile phones were rare, expensive and heavy devices exclusively used by wealthy people and international business executives. The market segmentation was then largely based on technology and economics. In 1997, usage exceeded 10% in most Western European countries and, thanks to a number of important technical breakthroughs, manufacturers were able to widen their product ranges and offer consumer handsets at much more affordable prices. This was the start of the consumer market segmentation (see Figure 2).

The early mobile phone adopters had turned into two very different groups. First the business users, the core target of operators at that time because they represented the most profitable customers, thanks to their extensive...
usage of voice and a willingness to make more use of mobile data. Second, the “trendies”, who tended to consider their mobile phones as a status symbol, and were therefore ready to pay a fortune to get the latest and smallest phone. The bulk of the market was made up of consumers who were purchasing their first mobile phones. At that time, usage and technology had equivalent roles. Early adopters had increased their usage, and consumers were expected to follow more or less the same learning curve driven by the availability of new features.

Today the picture is much more complex with mobile phone penetration currently above 70% of the population in Western European countries. Volume sales are now essentially for replacement phones with more features. Handsets have evolved from being merely a technological gadget to being a “commodity” that people carry with them all the time, like their keys or their wallet. In five years, the former three groups expanded to six different types. As shown in Figure 3, differentiation between the user groups now depends on usage complexity and the user’s personal involvement with his or her phone.

Logically, we observe the traditionally opposite attitudes towards technology as in other markets, with “early adopters” (or “forerunners”) and “laggards” (or “uninvolved”). However, between these extremes are several specific types of behavior. The main characteristics of each type are:

- **Uninvolved**: Make only limited use of their handsets and are not interested in anything more. They consider a mobile phone merely as a communication tool, and therefore expect it to be easy to use. Usage is restricted to a few calls per month and they own old handsets with limited functionality. Such users are much older than the average. This group is important in Europe.

- **New life harmony**: These users know a lot about mobile phones, but make only limited use of their handsets. For them, mobile phones have become part of everyday life and are no longer fashionable. In their personal values they are looking for an “active and varied life”. Although they have a recent handset, they have no interest in new features. They are younger than the average. This group is mainly found in Europe.

- **Voice as a link**: This type of user, who tends to be a “show-off”, is focused on the emotional aspects of using a mobile phone. It allows them to share emotions with others, sometimes for no particular reason. Their usage is voice centric. Although curious about new features, they behave as a “passive followers”, with new functions not being perceived as a real need. They are older than the average. This group is mainly found in Asia.

- **Adopters**: These are pragmatic users who consider mobile phone as a practical tool. They show a relatively strong personal link with their handset.

- **Intense**: Such people consider their mobiles as an indispensable link to their relatives. Their handset is above all a communication tool, and they make way above average use of SMS. They are expert users with a strong interest in new functions, and are much younger than the average. This group is more important in Asia.

- **Forerunners**: These are passionate users who expect their mobiles to reflect their personality. They are almost addicted to their mobile phones, and are generally over-equipped with hi-tech devices. Such people use all the handset’s features and make frequent calls, using their phone for both voice

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**Fig. 3 Mobile phone user segmentation as of 2003 [2]**
communication and text messaging. Their handset is no longer simply a communication tool, but a multimedia device. They are much younger than the average. This group is more important in Asia.

**Technology can be Readily Adopted or Rejected**

As the mobile phone typology has changed, so have the clichés. Advanced users (forerunner and intense) - the trendsetters of the mobile phone market - are no longer business executives in gray suits making international calls from airports. Today they are young people wearing Nike trainers downloading games and taking pictures with their handsets. However, whoever they might be, the advanced users adopt a similar attitude to technical innovation: they like it and are ready to spend money to acquire it. They represent a premium marketing target for all players in the mobile industry. Most flagship products and advertising are aimed at this group. Conversely, uninvolved users are not a priority target. Nevertheless, like the premium users, their attitude towards technology is highly predictable: they reject it. A few years ago, they never thought they would ever own a mobile phone. Now that they have one, they hardly use it.

These extreme cases seem to be crystallized by technological innovation through two opposite attitudes: unconditional adoption or rejection. Consequently, technology remains a powerful marketing driver. The question remains how to address the other half of the market, those people who, while not reluctant to innovate, are not ready to follow the path of the early adopters.

**Different Marketing Messages**

It is more difficult for mobile phone manufacturers to target the “in-between” types. Users groups, like new life harmony, are emerging from a so-called “mobile generation”. For many marketing experts, these young people have been considered as a core target. They are supposed to crave all the forthcoming mobile multimedia applications, such as picture messaging and video streaming. However, our survey [2] showed that this is not always the case. Although such users tend to be young and trendy, with a good knowledge of the possibilities of mobile phones, they are not interested in new functions. This is a sign that arguments like “buy this because it’s the latest technology” will no longer tempt such users to replace their handsets. In Europe, this group represents nearly 30% of all mobile owners [2]. Should the industry feel threatened by this? Probably not. It could simply mean that, now that the market is mature and has reached almost every category of the population, fewer people are fascinated by technological performance, particularly the younger generation. They do not express any particular expectations, but are aware of the latest technology developments. Their lack of enthusiasm is largely because of the way in which technology is being sold to them, rather than any rejection of the new services or functions themselves. Such users expect new technologies to naturally adapt to their needs.

**Conclusion**

In today’s mature mobile phone market, users’ attitudes are at least as important as technological capabilities. Because people tend to either adopt or reject technological innovation, a purely technical segmentation is irrelevant. Consequently, it is necessary to look at other factors when trying to identify the market drivers. Consumer research is one such factor. Technology must be presented through real usage benefits, with communication adapted to the various targeted user groups. Too often this marketing common sense has been forgotten or poorly executed, despite incredible technical achievements. Delays in the take-off of the Universal Mobile Telecommunication System (UMTS) have not helped either. Nevertheless, seen from a market segmentation perspective, these lost years have revealed some fundamental trends that should help all players, from mobile operators to manufacturers, to successfully introduce the next generation of mobile services.

**References**

[1] Consumer Research done by IPSOS for the Alcatel Mobile Phone Division in April 2002, with 1800 mobile users polled through face-to-face interviews in China, Taiwan, Germany and Italy.

[2] Consumer Research done by Research International for the Alcatel Mobile Phone Division in June 2003, with 2273 mobile users polled through face-to-face interviews in China, Taiwan, Germany, Italy and France.

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Abbreviations

CDMA  Code Division Multiple Access
GSM   Global System for Mobile communication
PDC   Personal Digital Cellular
SMS   Simple Message Service
TDMA  Time Division Multiple Access
UMTS  Universal Mobile Telecommunication System
WAP   Wireless Application Protocol