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Start-ups in a Time of Upheaval for the Mobile Industry

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Booz Allen Hamilton recently conducted a study of 3,000 start-ups in the mobile industry. Start-ups appear to be highly sensitive to the needs of the consumer and to future growth areas in the mobile arena. There is a correlation between the activities start-ups were involved with two or three years ago and what is happening in the industry today. There is also evidence that start-ups correctly anticipated which areas showed potential for growth, and focused on those categories to the exclusion of segments that subsequently turned out to be less profitable. This is likely to lead to start-ups facilitating innovative enhanced service propositions, as well as offering Mobile Network Operators (MNOs) and major suppliers a valuable insight into the future direction of the mobile industry.

The need for change

With slowing growth and increasingly saturated markets, Mobile Network Operators and suppliers face some difficult challenges. Attractive growth opportunities still exist. The trick lies in finding them, and selecting the right ones to invest in.

The importance of finding new opportunities is clear. In 2004 a staggering 610 million mobile devices were sold worldwide. Yet the mobile market, once one of the fastest growing in the world, is showing distinct signs of slowdowns in particular areas. There is a growing emphasis on low cost offerings. The mobile market is inundated with simple mobile phone tariffs, mainly on a pre-pay basis. Established MNOs also face competition from Mobile Virtual Network Operators (MVNOs). New business models are now emerging which promise success in the future, but which are as yet unproven.

The drive for lower costs has important implications for MNOs. Their margins are likely to shrink as prices for voice minute and data traffic decrease. Even if people use mobile services more often, the Average Revenue Per Unit (ARPU) in mobile telephony is expected to decline over the next few years if countermeasures by the MNOs don't reverse the trend.

With the commercial launch of Universal Mobile Telecommunications System (UMTS) 3G technology, mobile data services are one possible route to profits. But according to Merrill Lynch, in the fourth quarter of 2004 over 84 per cent of European MNOs' revenues was still voice based. The remaining 16 per cent was mainly accounted for by Short Message Service (SMS) traffic. Multi Media Messaging (MMS) is yet to take off. According to Germany's VATM, for example, in 2004 only one out of every hundred messages in Germany was MMS.

Finding new opportunities

In order to remain a profitable business, the mobile industry must do more to attract a wider range of users, and not just business executives who want to access their e-mail while they are on the move.

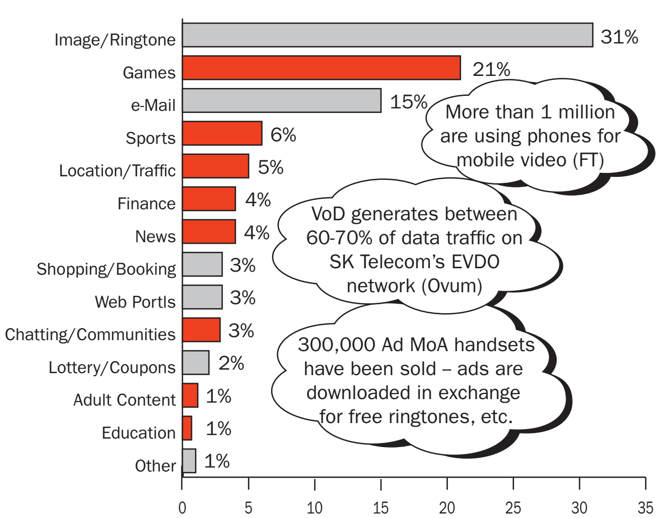
There are ample opportunities, and some companies (notably in Asia) are showing the way. One solution continues to lie in increasing data usage.

If users can be persuaded to use their mobile phone more for data applications, then this could offset much of the downward ARPU trend in voice. The greater penetration of UMTS adds the required functionality and speed. This in turn could prove a catalyst for widespread applications development.

This model is no longer theoretical; it is a reality in Asia, and even in parts of Europe. Several European and Asian countries, like Italy and Japan, already enjoy significant UMTS penetration and new mobile services. In these countries Video on Demand on mobile phones is not a myth, but a widespread reality.

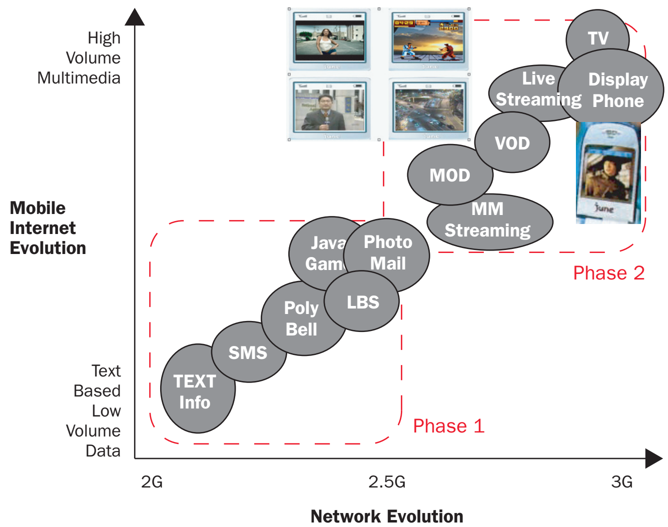
South Korea is a success story in this regard. In South Korea, extensive 3G access is allowing mobile services such as gaming, entertainment, Location Based Services (LBS) and mobile television to gain momentum. An example is "June", which is the premium wireless internet brand of SK Telecom. It provides Video On Demand, Music On Demand, real-time news, television broadcasting, and internet access using a data optimized network launched in Korea in 2002. Within eight months of its launch, June had one million subscribers. On average, a third of the ARPU generated by a subscriber to SK Telecom's June service already comes through data usage. It is developments like June that have paved the way for the success of the mobile industry in South Korea.

Exhibit 1
South Korean Wireless Internet Usage By Application



Source: Korean National Computerization Agency, Korea Internet White Paper, 2003

Exhibit 2
SK Telecom, Korea—"June" Case



Source: Booz Allen Hamilton

The Asian market is a shining example of how to get people to use their mobiles for more than just plain mobile voice calls. If you can take the success of Asia in increasing the use of mobile data, especially Japan and South Korea, and repeat it elsewhere in the world, suddenly the future for all the players in the market starts to look much brighter.

These examples also show that MNOs can not only participate in delivering innovative mobile services to mobile subscribers, but that they must be the innovators. MNOs may not be able to deliver this alone, however. They need to leverage the opportunities innovative start-ups can provide. Scalable solutions and business models like ASP, revenue sharing and managed services will become increasingly important, and innovative firms will offer their solutions in this way. One means of installing an "innovation radar" is to pay attention to and embrace the activities of start-up firms in the industry.

Start-ups, supposedly, have a good nose for innovative solutions driven by end-users. If this is true, they could boost industry efforts to identify and provide new mobile applications, infrastructure and devices to consumer and enterprise customers.

In 2005 Booz Allen Hamilton conducted a European market study on trends and future developments in the telecom service development platform arena. It showed that operators welcome closer partnerships with both major suppliers and smaller players such as start-ups. The first are perceived to bring trust, financial stability and overall reliability, whereas the latter bring much sought-after innovation as well as flexibility to customize. The majority of MNOs surveyed emphasized that, especially e.g. in the development of mobile portals and service delivery platforms, tighter cooperation between operators, suppliers and start-ups is essential. The approach is to take the best telco equipment and the best of IT/IP, shake it up and invent a new customer experience.

Start-ups in the mobile market

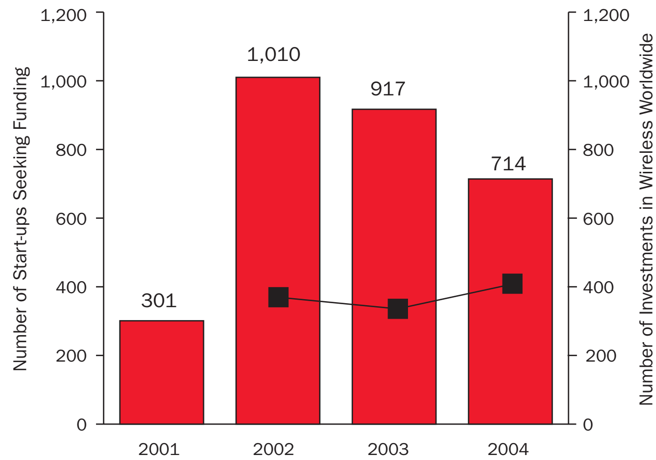
So, are start-ups really that good at identifying opportunities in the market? Is their reputation for innovation justified?

To study this new MNO supplier market, Booz Allen Hamilton screened about 3,000 start-ups in the mobile industry between 2001 and 2004, focusing on the United States, Europe and China. Our assumption is that the start-ups studied represented approximately three-quarters of all companies worldwide seeking start-up funding in the mobile industry, and therefore provided sufficient data to reveal general trends within the mobile industry start-up scene.

First we looked at the number of start-ups and the range of activities that they were involved in. Following on from this we took a closer look at how the level of start-up activity in the different industry segments had varied over time. We then drilled down another level within these segments to see if there were any trends

Exhibit 3

Total Number Of Start-ups And Number Of Investments In Wireless Worldwide Between 2001–2004



Note: Assuming 75% coverage of total start-ups. Year 2001 not fully covered
Source: Siemens Acceleration in Communications GmbH 2005, Venture Source 2005

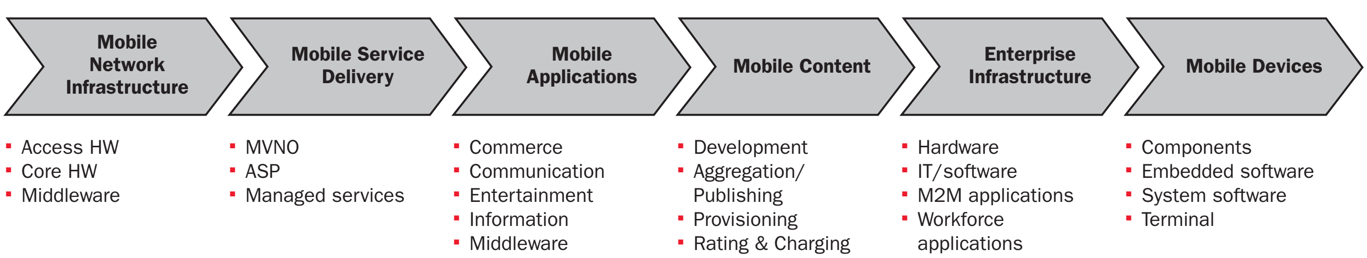
relating to changes in start-up involvement within the sub-segments.

As the study reveals, the numbers of start-ups decreased between 2002 and 2004. This development was caused by less favorable conditions for attracting venture capital. Since 2004, however, the venture capital market has shown the first signs of recovery, which is reflected in a slight increase in the number of investments in wireless worldwide. Mobile industry start-ups are once more attracting external funding.

The mobile market encompasses a wide range of activities, from mobile network infrastructure through mobile applications and content to mobile devices. Start-ups are involved in all aspects, from providing hardware components for MNOs to entertainment applications.

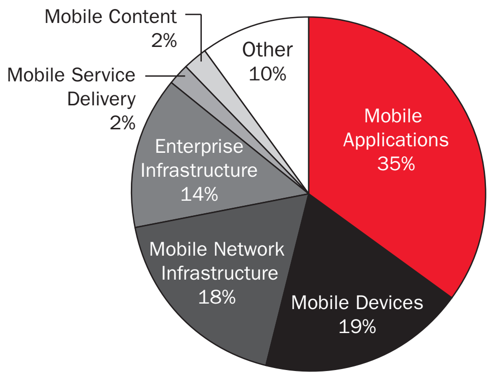
Exhibit 4

Wireless Market Value Chain And Examples Of Start-Up Activity



Source: Booz Allen Hamilton

Exhibit 5
Total Share Of Start-ups Activities, 2001–2004 (total number of start-ups: 2,942)

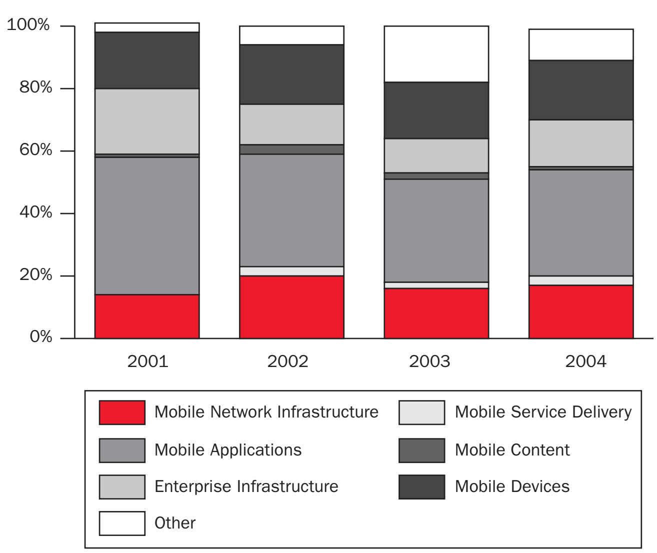


Source: Booz Allen Hamilton

Between 2001 and 2004 the activity that attracted the most start-ups was mobile applications. This was by far the most popular, with 35% of all start-ups focusing on this segment. Mobile devices and mobile network infrastructure were the next most popular activities, at 19% and 18% respectively. Least attractive to start-ups were the mobile content and service delivery segments, with just 2% of start-ups.

Interestingly, there was no significant variation in the share of start-ups in the different segments over the period studied. However, there was some evidence

Exhibit 6
Segment Shares, 2001–2004



Source: Booz Allen Hamilton

that from 2003 onwards more start-ups were attracted to fringe non-core activities such as the provision of solutions like mobile development toolkits, Internet consulting and law services, or manufacturing services, which we grouped under the heading of "Other".

Within the segments, however, there were significant changes, as start-ups pursued activities they thought more likely to lead to success within the mobile market.

It is evident that the majority of entrepreneurs entering the mobile arena believe that the mobile applications segment provides the most interesting opportunity for the future.

In fact the market for mobile consumer and enterprise applications promises significant opportunities for a large group of players including: Wireless Application Developers (WADs), Wireless Application Service Providers (WASPs), System Integrators, Telecommunication Equipment Manufacturers (TEMs), and media and software companies.

The majority have yet to make a significant move, however, as the mobile applications industry appears to have changed very little since Booz Allen Hamilton conducted the first major global study of the supply side of the mobile applications industry in 2001 (Nurturing the New Wireless Innovators, BAH, 2001). The majority of dedicated mobile applications specialists remain primarily start-ups.

Our study also reveals the activities within the mobile applications segment that start-ups consider the most promising for the future.

Entertainment is the area in which the majority of start-ups want to be involved. It includes services like multimedia, games, and handset personalization—logos, ring tones, ring-back tones. It is the focus for start-ups hoping to make a fortune. Not only is it the largest sub-segment, but it also increased its total share.

Mobile commerce, on the other hand, including mobile banking, mPayment, ticketing and shopping, was an attractive space for start-ups in 2001 and 2002, but interestingly has since lost much of its popularity for company founders—probably due to the slow time to market for those solutions.

In the area of mobile network infrastructure, start-up priorities remain fairly constant. The middleware category, mostly comprised of carrier platforms for messaging (SMS, MMS), was the largest start-up area.

The mobile device segment is dominated by the component category. Here start-ups appear to have correctly anticipated the increase in more fully featured devices favoring the components section that includes products like Bluetooth based peripherals, PDA solutions or next generation displays.

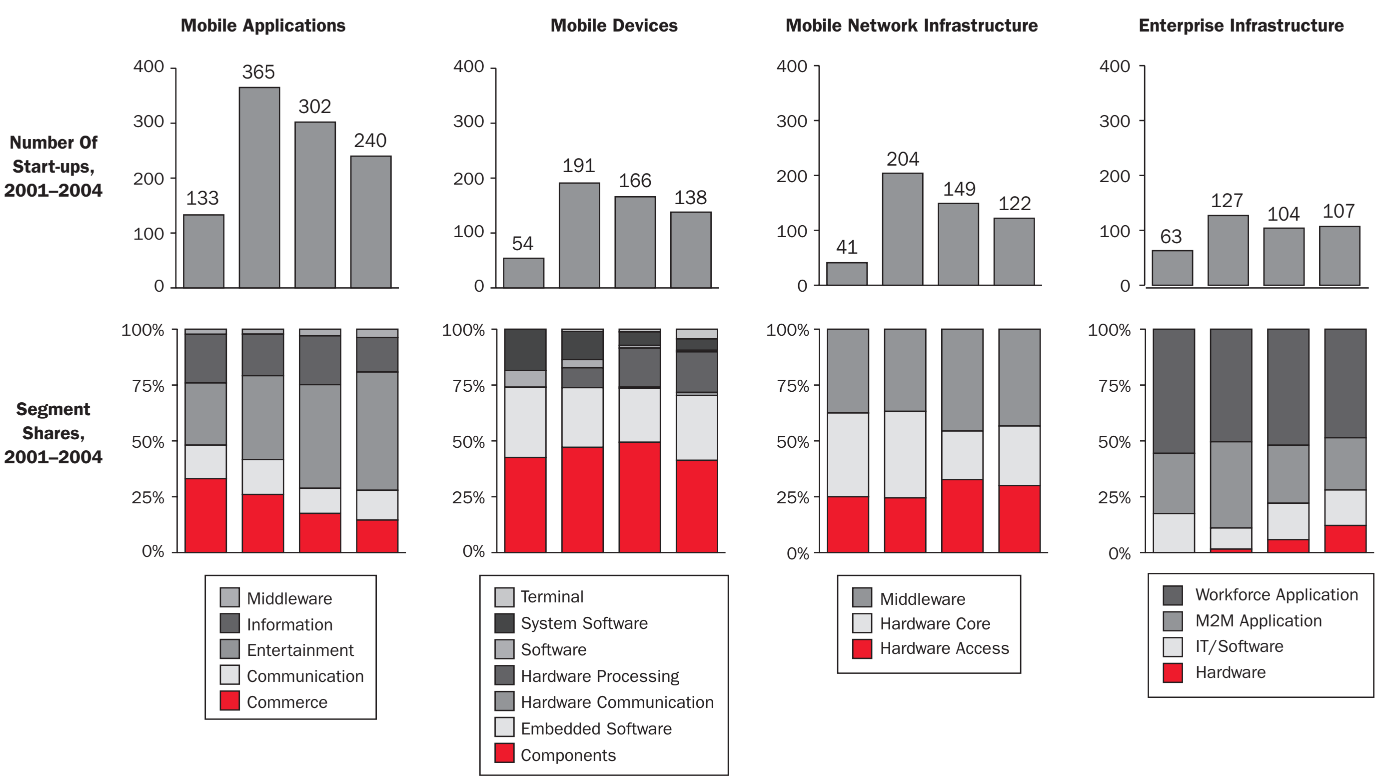
Another clear trend to emerge is the rapid growth of hardware developments in enterprise infrastructure. This, for example, includes wireless surveillance and monitoring solutions. However, not surprisingly the main category within enterprise infrastructure is workforce applications, with over 50 per cent of the segment covering enterprise collaboration, Virtual Private Networks (VPN) and mobile Customer Relation Management (CRM) solutions. As researchers predict, this is the area of fastest growth in the mobile enterprise solutions segment.

Innovators

The in-depth analysis of the start-up scene shows which segments and sub- segments are attracting the interest of entrepreneurs, venture capitalists and some of the brightest, most innovative talents in the industry. If the start-ups are making the right bets on the future, then the activities they chose to focus on over the last two or three years should be driving the mobile industry today.

The evidence is that they are getting it right. Mobile applications is the space where most start-ups are hoping to make their mark. Within this, entertainment is the most popular sub-segment. Indeed, in 2004 entertainment was the second largest mobile data application in Western Europe, with a 12% share of revenues according to Ovum. In Asia, mobile data revenues split almost equally between messaging,

Exhibit 7
Number Of Start-Ups And Segment Share, 2001–2004



Source: Booz Allen Hamilton

entertainment and information. It seems start-ups made the right bet when they decided to concentrate on mobile entertainment development two or three years ago.

Start-ups were also right to switch their bets from commerce to middleware and platforms. MNOs increasingly face the challenge of integrating legacy environments with new platforms, but also of looking for ways to reduce operating costs. In June 2005, for example, Vodafone announced it had reduced its operating expenses as a share of service revenues from 22.8 per cent in 2003 to 20.2 per cent in 2005. It had achieved this mainly through a reduction in network, IT and billing technology expenditures. Technology and infrastructure has become more and more complex in the recent years, but intelligent middleware and service platforms are effective ways to address these issues. Therefore they are high on the agenda of many MNOs. In total, approximately 250 of the 3,000 start-ups have chosen to provide solutions in this area.

Another area where start-ups made the right call two or three years ago is mobile devices, where they have developed components which device manufacturers or end users can now directly integrate into their handsets.

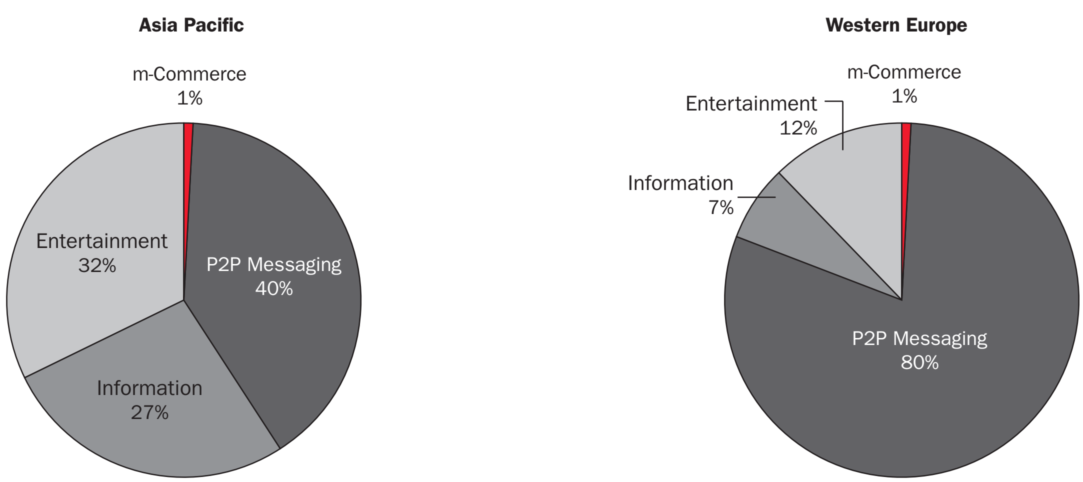
In 2004 feature phones—phones which enable not only voice, but rich Value Added Services—made up 52% of the total phones sold. Up until 2002 only 25% of mobile devices offered features other than voice. In recent years mobile devices have migrated from a pure phone functionality to become a multi-purpose device. A world where phones lacked features such as in-built cameras, true color displays and Bluetooth ear-sets is hard to imagine. And although "no frills" devices will continue to be popular, the trend towards rich feature devices is likely to grow considerably.

Start-ups also correctly identified enterprise applications as an area of growth. Enterprise customers have two major needs: to provide information to employees when they are out of the office, and to support business processes executed by employees whose jobs are inherently mobile.

Whereas e-mail push services such as Blackberry are already widely accepted, mobile office applications such as mobile Outlook are still awaiting a breakthrough. However, all across Europe, mobile operators are launching new services that allow companies to extend their collaborative applications (including e-mail, calendaring, and contacts) to a mobile platform.

Workforce applications, which attracted the interest from start-ups several years ago, are now among the

Exhibit 8
Split Of Consumer Data Revenues By Application In 2004



Source: Ovum

leading enterprise applications making the transition to a mobile environment.

According to IDC, in 2002 the number of users working with mobile workforce applications in Western Europe was below one million. By 2005 that number had increased sevenfold, to approximately 7 million users.

Looking to the future

As we have seen, the areas start-ups choose to focus on can serve as indicators for trends in innovation in the mobile industry.

In general the analysis supports the view that start-ups focus on areas which are not yet standardized and which are driven by end-user needs, such as mobile applications and mobile devices enhancements. They tend to fill niches where larger suppliers show little interest due to higher risk, or where the larger suppliers can't devote sufficient time and management attention to the challenges involved.

The data does not prove whether start-ups are driving the mobile industry or, alternatively, if they are picking up on market trends at an early stage. What our analysis of 3,000 start-ups does show, however, is that there is a correlation between the segments and sub-segments that most start-ups choose to operate in and those that become more mainstream two to three years down the line.

It appears that a systematic analysis of trends amongst start-up industries in the mobile arena provides a useful predictor of trends in innovation. It is never possible to predict the future 100%. However, if you take a large number of start-ups and look at the activities they are invested in, the chances are that the rest of the market won't be far behind.

Entertainment (as part of mobile applications and mobile device components) is still one of the largest points of focus for start-ups. Initial developments in Japan and South Korea suggest it is likely we will see entertainment services on rich feature phones continuing to compensate for shrinking ARPUs in the rest of the world.

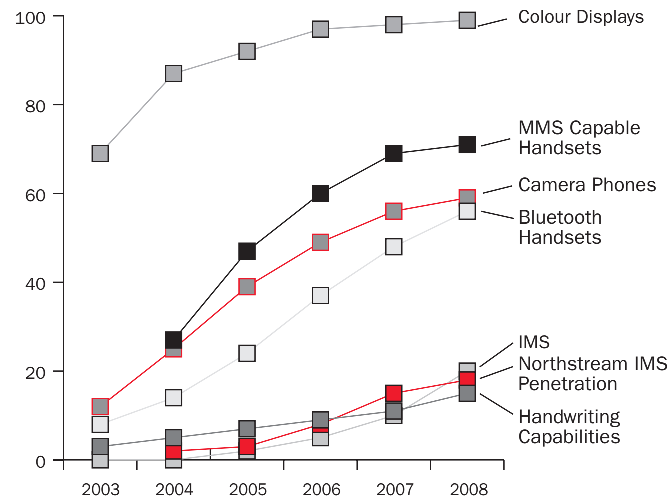
The declining interest from start-ups in m-commerce and enterprise machine-to-machine services suggests that this is likely to remain a niche market within the mobile industry.

The sensitivity of start-ups to promising market sub-segments allows MNOs and major suppliers to focus their activities with greater confidence since, as the study reveals, highly innovative start-ups may point the way to enhanced service propositions.

Start–ups may be small, highly specialized, and lack influence on their own. However, it is clear from our study that they play a vital role in the mobile industry. Booz Allen strongly believes that the start-up industry must be nurtured to allow for innovation in the mobile arena. Through collaboration in specific areas with MNOs and suppliers, highly innovative start-ups can help shape a promising future for the mobile industry.

Exhibit 9

Global Handset Feature Penetration 2003–2008



Sources: ARC, Northstream, Booz Allen Hamilton analysis

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