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How Wireless Carriers Will Make Mobile Data Pay

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How Wireless Carriers Will Make Mobile Data Pay

Telecom carriers worldwide are poised to conquer the fast-growing mobile data market. But success requires a new business model.

by Helmut Meier, Roman Friedrich, Hanno Blankenstein, and Alexander Froment-Curtil

Mobile telecommunications operators worldwide — from Japan's NTT DoCoMo to France Télécom's Orange to the U.S.'s Verizon Wireless — are in a difficult spot. The wireless network connection has become a commodity; the licensed network is no longer a key asset. Revenue growth from traditional cell phone voice services is slowing, despite the increasing popularity of wireless phones and more dazzling portable multifunction "smart" phones (with such features as cameras, PDAs, e-mail, and Web connectivity). Having spent billions on fabled 3G broadband networks, many mobile telecom companies are now saddled with paying off huge capital investments. Meanwhile, aggressive new competitors from every part of the digital value chain — application developers, software vendors, content owners, handset manufacturers — are all intent on getting their piece of the wireless action.

So where can mobile service operators go for growth? We believe the next big opportunity is in mobile data — the digital sounds, pictures, videos, games, and text messages fancied by a burgeoning population of consumers who view their mobile devices as much more than a telephone. Indeed, launching mobile data services to capitalize on the expanding broadband infrastructure is the biggest new business opportunity for the wireless telecom industry since its inception more than a decade ago.

Through broadband and even narrow-band networks, the latest portable digital communications devices will soon reach data transmission power similar to that of personal computers. Consumers seem enthralled by the possibilities, and mobile operators in the most advanced markets are already reaping the profits. According to the *Financial Times*, NTT DoCoMo has moved nearly 40 million of its 46 million mobile service subscribers in Japan to the popular i-mode data services platform. The *FT* reports DoCoMo's monthly revenue from i-mode users is typically 20 percent more than from its voice-only services.

Our market projections, which are supported by other wireless market watchers, suggest that sending short text messages, getting

> **"Aggressive new competitors to mobile operators, from every part of the digital value chain, are intent on getting their piece of the wireless action."**

news, playing games and lotteries, watching sports, and sharing photos and video clips will be the top generators of revenue growth in mobile products and services in Europe within three years, with a similar growth trajectory expected to follow in the U.S. Nokia projects that the annual worldwide business in mobile data services will grow to 180 billion euros by 2007, more than quadruple the current revenues in this area.

Business Model Options

To profit from these opportunities, however, wireless companies have to make critical choices over the next one to two years with respect to their mobile data strategies.

Booz Allen Hamilton's research and ongoing discussions with industry leaders indicate that mobile telecom companies have two business model options. One alternative is to adopt a low-cost, low-risk, lower-growth connectivity model with the objective of increasing the volume of data transmitted over the company's wireless network. Here, the mobile operator focuses on growing traffic, but misses out on opportunities to capture value from the content carried over its network. This strategy may be viable for companies with limited financial resources that can compete on the price for, rather than on the value (breadth and quality) of, their services. But this is not a viable strategy for the major wireless carriers, especially those that have already made significant 3G investments.

"In the integrated service model, mobile operators don't simply provide a connection. They're positioned to directly influence and profit from the customer's total wireless experience."

For them, a higher-cost, higher-risk but higher-value "integrated service" model makes more sense. With this approach, mobile operators don't simply provide a connection, they position themselves to directly influence and profit from the customer's total wireless experience.

In the integrated model, pricing is determined on the basis of the value of content rather than the volume of data transmitted; wireless operators play a much bigger role in packaging, promoting, and selling the content, subscriptions, and services offered by content companies. Operators also work much more closely with handset manufacturers than they have in the past to develop unique new devices designed for the multimedia experience, which can serve to enhance both partners' brands. Such partnerships will be crucial to the mobile operator's ability to expand revenue streams, grow market share, and make customer

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relationships more valuable.

To date, mobile operators have followed the lead of the first generation of U.S. and European cable and Internet service providers, which applied a connectivity-only business model. These companies charge consumers for access to their network and have agreements with third-party content providers (e.g., game developers, instant messaging services) to use their network as a distribution channel. Third parties also develop their own paid relationships with consumers. Because their revenues have come primarily from charging for use of their network, mobile carriers have historically focused on network efficiency. It has been up to the third parties to make the large investments in complex IT systems to deliver the multimedia experience and take the marketing and distribution risks.

Mobile network operators could continue to capture the basic value from owning the connection, but their ability to grow is limited because they're always one step removed from the customer experience. They bear none of the responsibility for or the risks involved in signing up more wireless service customers or for providing the innovations and quality that attract people. To earn the required return on past and future investments, mobile operators can't continue to have a business model limited to running networks and providing connectivity while others are capturing the value created by the services running through the network.

Charging for services on the basis of the volume of data transmitted rather than by putting a price on the type and the quality of content is also a mistake mobile operators have perpetuated by copying the business models of early Internet players. When we asked 700 consumers of mobile telephone services in five major European markets in the fall of 2002 what kinds of payment methods would be most acceptable to them, 69 percent said they preferred paying a price per download of content (e.g., per song). Only 14 percent said they would be willing to pay according to the volume of data transmitted (e.g., per megabyte).

Not only is value-based or event-based pricing more acceptable to users, our analysis shows that such pricing will stimulate demand and enable mobile operators to maximize revenues. For example, at the prevailing volume-based rate charged by European mobile operators in February 2003, downloading a one megabyte music track would have cost 10 euros, but a standard text message would have cost only 0.0001 euro. According to our research, the optimal price would have been closer to 1 euro per download for a song and 0.2 euro for a short text message.

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Partners in the Value Chain

Mobile operators must also establish constructive relationships with everyone who brings value to wireless products and services — the content providers, mobile handset manufacturers, applications developers, and system integrators. Mobile operators may not need to manufacture devices or generate content themselves, but they must increase their economic involvement and sphere of influence in this market to strengthen their control over revenue and profit.

Through partnerships, wireless telecom operators can achieve two objectives that improve the customer experience and increase the financial rewards for companies — create an integrated service environment and influence handset design.

Create an integrated service environment. The "service environment" of a wireless device, which includes the user interface and the underlying software platforms, shapes the user experience (e.g., ease of use, reliability, and security). Mobile companies are well positioned to understand the complex requirements that go into creating a quality wireless experience. Indeed, they have the advantage of overseeing all the relevant factors: the interface, pricing, security features, content discovery channels (e.g., portals, word of mouth, television ads, promotional games), network quality, user content preferences (determined by what is most downloaded), reactions to branding, and more.

Only a few players in the wireless arena, including Nokia, Microsoft, and Qualcomm, currently demonstrate the potential and willingness to challenge the mobile telecom operators on the quality of their integrated services. These companies have their own portals, content, user interfaces, and applications. The mobile telecom companies can work constructively with them using contracts, service level agreements, and brand and service tie-ins, among other arrangements, but mobile operators need to build capabilities themselves to reap the benefits of their partner's expertise without sacrificing returns.

Influence handset design. Mobile operators have historically had little involvement in handset design and configuration (except in Japan). Operators typically set prices and managed customer access, whereas handset manufacturers like Nokia, Motorola, and Siemens drive device innovations (e.g., smaller handsets, longer battery life, varied ringtones). With the spread of mobile data, cobranding between device manufacturers and mobile service operators is becoming more visible on the handset (for example, the Sprint name and logo is printed on Sanyo's 8100 picture phone). Mobile operators also need to be involved in choosing other key elements that affect their brand, such as the operating system and the selection of preloaded software applications.

Two European mobile operators, Vodafone and Orange, are leaders in such collaborative partnerships. For example, the Sharp GX10i handset is specifically designed to complement the special polyphonic ringtones, downloadable games, and other multimedia features available through the "Vodafone live!" service. This month Orange is introducing the Motorola MPx200, which uses the Microsoft Windows operating system and is being marketed with special services "exclusive to Orange."

In the past, mobile operators bought totally undifferentiated devices. Now more companies will look to device manufacturers to make tailored handsets based on specific hardware (memory card), software (Vodafone live! messaging), and product features (video telephony). Manufacturers could even design entire service environments for mobile operators and sell them as preconfigured integrated solutions.

Through increased cooperation with mobile operators, handset manufacturers and component suppliers should be better able to focus R&D on innovations that can be brought to market rapidly and that are likely to succeed. Manufacturers can also work with mobile operators to jointly manage inventory levels of components and finished products through demand forecasting, and lower component costs by having operators select in advance common components for different devices (e.g., two or three screen types for all handsets).

Scale Advantages

Large mobile service operators who pursue an integrated service model will spend more money on product development, have greater control of the value handsets deliver through deeper strategic relationships with a few manufacturers, and will likely establish extensive networks of relationships with content providers that deliver a variety of multimedia services. These operators will have high fixed costs, but will retain more revenue per customer. Mobile service providers that achieve global scale, as DoCoMo has with i-mode, can leverage their research and new product development cost across geographies and through alliances.

Smaller operators are likely to earn less than the larger firms because their costs for providing mobile data services are higher, and, to compete with larger players, they will need to share more of the risks and rewards of this new market with partners.

So far, few mobile operators have actually begun to pursue strategies in line with what we suggest. But in our discussions with industry leaders, we detect growing interest in and movement toward this integrated model. And for good reason: It's the best way to profitably deliver high-quality mobile data services. +

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