NTT DoCoMo

DoCoMo Newsletter

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BIMONTHLY

CONTENTS

FEATURE

HSDPA Brings 4G Closer to Reality

3GSM World Congress and N902iX HIGH-SPEED

The higher speed and convenience of fourth-generation mobile technology came within closer reach in May, when DoCoMo announced its 3G FOMA™ N902iX HIGH-SPEED handset and M2501 HIGH-SPEED data card, both of which support high-speed downlink packet access (HSDPA).

The HSDPA standard based on W-CDMA networks was developed by the 3rd Generation Partnership Project (3GPP), an international collaboration aiming at worldwide standardization of 3G mobile technologies. HSDPA is also called "3.5G," because it operates on existing 3G networks but achieves higher speeds. Downlink speeds can theoretically reach approximately 14Mbps. The HSDPA handset and data card to be released this summer offer downlinks at a maximum 3.6Mbps, about 10 times faster than current FOMA handsets.

DoCoMo's new HSDPA service will cost the same as existing FOMA packet-data services, and no special contract or additional fee will be necessary. The service, beginning in Tokyo's 23 wards this summer, is expected to be available in 70% of the country by March 2007.

A prototype of the handset was demonstrated at 3GSM World Congress in February and CTIA Wireless in April, generating intense interest among 3G operators from around the world. For DoCoMo, the world's first operator to launch a commercial 3G service, this is the next step in the company's ongoing expansion of the mobile broadband horizon, which someday will result in a commercial 4G service.

HSDPA Builds on Existing Technologies

As an extension of W-CDMA technology, HSDPA enables operators to enhance their existing 3G networks with increased speed and capacity. The market is clearly transitioning to 3G, making this an ideal time for DoCoMo to introduce the enhanced capabilities of HSDPA. Subscribers to DoCoMo's 3G FOMA service recently surpassed subscribers to the company's 2G mova™ service, and the number

is expected to approach 35 million by March 2007.

Outside of Japan, however, there are still many markets where 3G has not yet made significant inroads, and some people wonder if greater communication speeds are really necessary. But once a user becomes accustomed to faster speeds, there is no going back. The trend is clearly toward 3G networks worldwide, so the emergence of HSDPA has been highly welcome.

Operators especially appreciate the fact that they can layer HSDPA on top of their existing 3G networks. As one R&D staff member points out, "One of the defining features of HSDPA is that it adds only minimal hardware to existing networks."

New Music Service Showcases 3.6Mbps Capability

So what can users expect from DoCoMo's new 3.5G service? The main benefit will be 3.6Mbps transmission rates for downloading large files and streaming rich content. One of the new services to take advantage of this extra speed will be Music Channel™, which will be launched at the same time as DoCoMo's new HSDPA handsets.

Music Channel will deliver music programs of up to an hour or so, which users can select for automatic download to their phones during the late-night hours. The next day the music will be right there in their phone waiting to be enjoyed, for example, during the morning commute.

"Music Channel was implemented with HSDPA in mind. We've focused on offering a service that is easy, convenient and appealing. Technological advances must be accompanied by greater attractiveness, otherwise the technology is of little benefit to users," says DoCoMo. High-speed capability will hasten the ongoing evolution of mobile phones as entertainment devices.

From 3.5G to 3.9G, then 4G

In preparation for 4G, DoCoMo has already successfully achieved 2.5Gbps packet transmission in a field experiment. In addition, the company is developing related infrastructure for additional new technologies to be added in the near future, such as Super 3G, commonly referred to as 3.9G, which adopts the same spectrum as 3G networks while using the 4G standard.

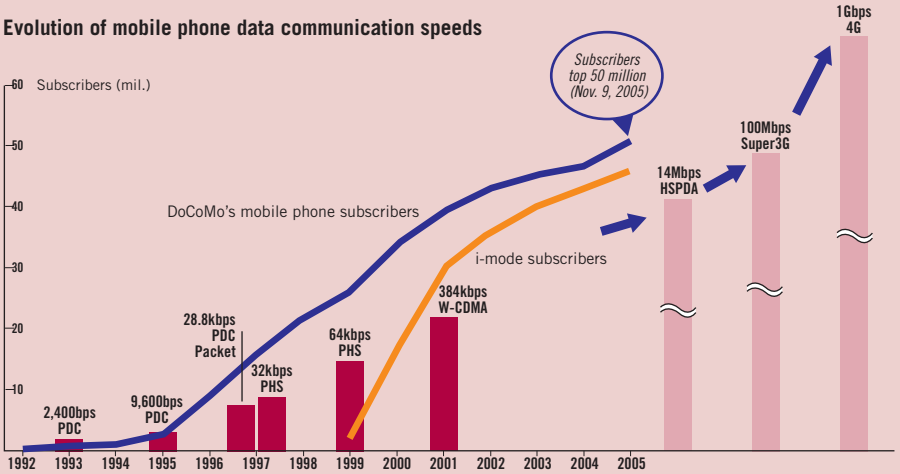
The development of such an infrastructure involving a complex array of network elements requires technological expertise and leadership in the creation, maintenance and operation of mobile networks. DoCoMo is one of the world's few operators capable of doing what it takes to succeed in the commercial development of 4G networks.

With 4G on the Horizon, Data Speeds Steadily Increase

Mobile phones, originally developed for voice communications only, first gained data transmission capability in 1993. The initial data speed was 2,400bps, but within two years it had quadrupled to 9,600bps. In 2001, FOMA, the world's first 3G mobile service based on W-CDMA was launched, offering high-speed packet transmissions of 384Kbps.

Since then, both mobile phone subscribers and communication speeds have risen rapidly, and the demand for speed continues to intensify. The launch of DoCoMo's HSDPA service, which offers higher downlink speeds for 3G networks, is merely a precursor to the advent of 4G, which aims to realize unprecedented speeds of up to 1Gbps!

Evolution of mobile phone data communication speeds



Dennis Lui, Hutchison Telecom Chief Executive Officer (right), and Takeshi Natsuno, DoCoMo Senior Vice President, Managing Director of Multimedia Services Department, make a wish for a successful i-mode partnership by painting the eye of a Japanese *daruma* doll.

Hutchison Telecom Hong Kong

Hutchison Telecom Hong Kong, a leading mobile operator in Hong Kong with more than two million 2G and 3G subscribers, formed a strategic partnership with DoCoMo on June 1 to provide i-mode™ services in Hong Kong and Macau.

Speaking at the press conference to announce the tie-up, Chief Executive Officer Dennis Lui commented: "We are delighted by this partnership. In addition to providing cutting-edge services for our customers, it consolidates our position as Hong Kong's most forward-looking mobile operator, as we continue to lead innovative developments in the mobile industry and seek to shape the communications market into the future."

Hutchison Telecom, the pioneer of numerous mobile technologies, was Hong Kong's first operator to roll out a world-class 3G service, which it markets under the "3" brand. Today, however, now that the market has reached its capacity in terms of new subscriptions, the company is focused on meeting demands for faster and more diverse multimedia content. It selected i-mode as the platform for delivering a vast array of useful and entertaining content, thereby enabling users to maximize the benefits of mobile multimedia in their modern lifestyles. Hutchison Telecom is also preparing to launch e-wallet services with cooperation from DoCoMo.

DoCoMo PARTNERS

Hutchison Telecom Hong Kong

TELECOMMUNICATIONS RESEARCH By InfoCom Research, Inc.

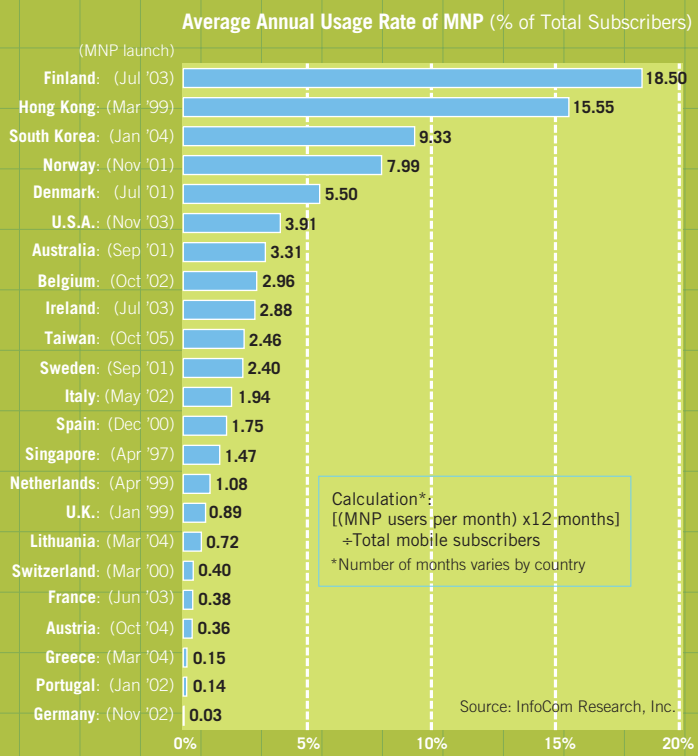
Japan Catches up with Global Shift to MNP

A system that enables users to retain their original telephone number when they change mobile operators, known as mobile number portability (MNP), will be introduced in Japan by November. The move comes later than in many other countries, but better late than never, most would say.

Initially introduced by Singapore in 1997, the system has been adopted in more than 20 countries, including the U.S. and many countries of Europe and Asia. Annual average usage is still not very high among total subscribers, averaging less than 5% globally, but rates have reached as high as 18% in Finland and 16% in Hong Kong.

MNP tends to weaken the customer's loyalty to a specific operator. Consequently, operators must work harder to retain customers by running frequent promotions and offering new discount services. MNP has intensified market competition, and enabled customers to closely compare operators in terms of rates, services, voice quality and handset design.

Although the introduction of number portability has not led to drastic fluctuation in market share in most countries, the effect on Japan's saturated mobile market is likely to be significant.



France's Bouygues Telecom Execs Visit DoCoMo

May 10 ▸ Bouygues Chairman and CEO Martin Bouygues and Bouygues Telecom executives visited DoCoMo in Tokyo on May 10 to discuss global strategies for i-mode™ and to learn more about Osaifu-Keitai™ e-wallet services and mobile-phone credit cards offered in Japan. Bouygues Telecom launched i-mode in 2002 and now has 1.5 million subscribers. It debuted the "i-mode Haut Débit™" service for full-track music downloading, mobile TV (packet streaming) and other high-speed applications in October 2005, ahead of similar applications in Japan. The Windows Live Messenger site in the i-mode portal is also quite popular with French customers. The executives also observed a phone-based commuter pass system, developed by a railroad company together with DoCoMo and other mobile operators, a concept that Bouygues Telecom may introduce in France.

DoCoMo Joins CommunicAsia2006 in Singapore

June 20 ▸ DoCoMo displayed its new 3G FOMA™ 9 series handsets and latest technologies at CommunicAsia2006, Asia's biggest IT and communications event. Some 36,857 exhibitors took part in the show from June 20 to 23. Joining DoCoMo in the booth was its local subsidiary inter-touch Pte Ltd, which owns companies that provide broadband access and applications to hotels and the hospitality industry. DoCoMo's appearance came at a time when its i-mode service has been rapidly gaining popularity since its launch in Singapore last November by StarHub. Some observers speculate that i-mode will help to revitalize the nation's mobile market.

May 11, 2006 ▸ DoCoMo unveiled eight 3G FOMA 9 Series handsets, all of which are preinstalled with software required to use DoCoMo's DCMX™ credit card. All have music players, and some are compatible with DoCoMo's Chaku-Uta Full™ service for downloading full music tracks. The series also includes Japan's first HSDPA-compatible handset, which has a downlink packet-transmission speed of up to 3.6Mbps, 10 times faster than current FOMA handsets. Another model, the F902iS, will support Windows Media Audio and Windows Media Digital Rights Management 10 for Portable Devices, based on DoCoMo and Microsoft's agreement to use Windows Media in FOMA handsets. Windows Media will enable DoCoMo's handsets to play music downloaded to a PC from over 100 online music services worldwide as well as music content ripped from CDs.

June 8, 2006 ▸ DoCoMo and Research In Motion (RIM) will market RIM's BlackBerry™ handheld devices to corporate customers in Japan starting in autumn. The devices will operate on both W-CDMA (UMTS) and GSM/GPRS networks, enabling them to be used for both voice and packet (data) communications around the world. They will have QWERTY keyboards, similar to those of PCs, for fast thumb-typing.

June 15, 2006 ▸ DoCoMo, Motorola, NEC, Panasonic Mobile Communications, Samsung Electronics and Vodafone will establish an open Linux-based software platform for mobile devices. Benefits for the mobile industry will include lower development costs, increased flexibility and a richer mobile ecosystem, all of which is expected to result in more compelling, differentiated and enhanced consumer experiences.

DoCoMo DATA

3G FOMA Service Surpasses 2G mova in Subscribers

Subscribers to DoCoMo's 3G FOMA™ service surpassed the 2G mova™ service in number of subscribers, totaling nearly 25.85 million as of June 18. Launched in October 2001, FOMA has attracted new subscribers with its rich lineup of content, high-speed broadband capability, high-quality voice/video, wide range of handsets, attractive billing and discount plans, and extensive coverage. One of the most popular new phones, a child-friendly model that lets parents keep track of their children via GPS, sold about 80,000 units—mostly to new customers—in the first month after its March release. More recently, DoCoMo enhanced the service with DCMX™ mobile-phone credit cards, and in the near future will offer an advanced handset with ultra-high-speed HSDPA capability. FOMA subscribers are expected to increase to 35 million by March 2007.

Rapidly Expanding 3G FOMA Subscriptions