

The Era of i-mode and PlayStation 2

By Yuasa Izumi

Two consumer-oriented electronics products developed with Japan's proprietary technology are enjoying sizzling sales throughout the country.

One is the i-mode cellular phone, which enables users to readily access the Internet anywhere and anytime. The other is PlayStation 2, a high-performance household video game console boasting a built-in digital versatile disc (DVD) drive, which will be fitted in the future with high-speed communications functions.

Both i-mode technology and PlayStation 2 are expected to play vitally important roles in electronic commerce in Japan and become key players in the consumer-oriented (B to C) businesses.

Japan is on the threshold of an era in which i-mode technology will dominate consumers' outdoor lives and PlayStation 2 their indoor lives. They even threaten to replace personal computers. PCs, which have so far led the information device market, have merits in that they can be used for any purpose. But they are now becoming less user-friendly due to their all-round characteristics.

The i-mode mobile Internet service was launched in February 1999 and garnered 4,326,775 subscribers in only one year. Young people pressing small buttons on their i-mode handsets can now be seen at railway stations, in coffee shops and on street corners throughout the country.

The i-mode service is offered by NTT Mobile Communications Network Inc., better known as NTT DoCoMo, the mobile phone unit of telecoms giant Nippon Telegraph and Telephone Corp. NTT DoCoMo is Japan's largest mobile phone operator with about 10,000 employees.

The staggering popularity of the i-mode service is attributed to 1) its rich content, 2) the adoption of an open

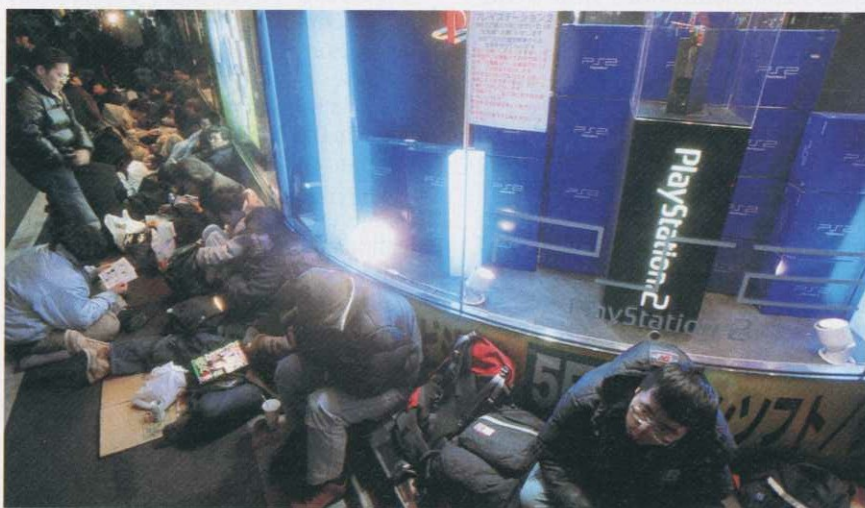


Photo : Mainichi Photo Bank

People waiting overnight in a long queue to buy PlayStation 2

technological standard, and 3) its user-friendliness.

Rich content is a particularly important factor in the rapid spread of this unique mobile Internet service. DoCoMo, with its strong brand-name appeal as well as its technological and marketing efforts, succeeded in tying up with hundreds of companies to ensure rich i-mode content for subscribers.

Enoki Keiichi, NTT DoCoMo director and chief of the company's Gateway Business Division responsible for the i-mode project, boasted that the i-mode service is two to three years ahead of similar services planned in Europe and the U.S.

The i-mode enables users to exchange e-mail, call restaurant guides, read the latest news and surf Web sites specially formatted for the oversized liquid crystal screens. Furthermore, i-mode subscribers can use their handsets for "mobile banking" to make bank remittances or confirm balances of deposits, and for "mobile trading" to buy or sell stocks. Hotel, travel and theater ticket reservations are also pos-

sible with i-mode. Such services uphold the popularity of i-mode.

Mobile banking and reservations are called "transaction services" since subscribers and the service center are involved in various dealings, with subscribers answering questions from the center, and vice versa.

Communication services like i-mode require complex systems and advanced knowhow, but NTT DoCoMo succeeded in opening up a lead over rival carriers. "Service content separates us from our competitors. The inclusion of transaction services greatly contributed to our success," said DoCoMo president Tachikawa Keiji.

Another factor behind DoCoMo's success in winning a large number of subscribers was its adoption of an open technical standard for enabling its subscribers to access the Web, according to Tachikawa. The i-mode service adopted a standard called "compact hypertext" (C-HTML) for its markup language. C-HTML is a compact version of HTML used for regular Internet homepages. Therefore, it is easy to make an i-mode homepage with a

minor modification to a regular homepage.

At the same time, the adoption of an open standard allowed NTT DoCoMo to expand its operations throughout Japan. DDI Corp., the second-ranked Japanese communications firm trying to catch up with DoCoMo in cellular phone service, fell far behind DoCoMo in earnings due to its failure to adopt this standard.

The cellular phone sector in Japan can be roughly divided into three groups: nine companies of the NTT DoCoMo group, 12 companies affiliated with DDI, and nine companies of the J-Phone group affiliated with Japan Telecom.

The 12 DDI-affiliated cell-phone companies chose the wireless application protocol (WAP) for their group's markup language. Since WAP is incompatible with regular Web homepages, few companies have bothered to set up WAP-based homepages. As a result, DDI has fallen behind DoCoMo in the number of Internet sites accessible by its users.

Oboshi Koji, DoCoMo's first president and currently chairman, recalled how the i-mode service was launched. He said that since i-mode adopted an open standard someone with no relation to DoCoMo made a homepage capable of being accessed by i-mode handsets without being asked by DoCoMo to do so.

Such a homepage is called a "voluntary site." Voluntary sites formulated for i-mode now number more than 10,000. Some of the sites are set up by companies, but "notices" offered by individuals account for a large portion. Young users frequently access the sites, write messages and try to find friends, often members of the opposite sex. In this way, i-mode caught the fancy of young people because it enabled them to readily make friends.

It is no exaggeration to say that DoCoMo's i-mode owes its popularity to both "official sites" made by companies and "voluntary sites" set up by individuals.

The third factor is its focus on user-friendliness.

It adopted a "packet telecommunication" system which sends data in small packets and keeps users continually linked to the sites at low charges. Also, it is structured in such a way that people find it easy to use.

DoCoMo executives regard the mobile communications sector as the only sector in which Japan is ahead of the U.S. They note that while about 60% of cellular phones are still analogue in the U.S., most handsets used in Japan are digital, with many even allowing packet telecommunications. Though the building of packet communications networks requires vast investment in addition to regular cellular phone networks, NTT DoCoMo achieved it ahead of the U.S. and Europe.

It must also be noted how fast the i-mode service can be started. In the opinion of DoCoMo President Tachikawa, the secret of the popularity of i-mode lies in the fact that users can easily access the Internet with i-mode. He points out that while it takes two to three minutes, and sometimes even as long as five minutes, to switch on a personal computer and access the Internet, i-mode keeps users continually linked to the Internet, allowing them to access sites instantaneously. "It is really simple," Tachikawa says.

When Microsoft launched Windows 95 in 1995, everybody anticipated that the operating system (OS) would take the world by storm. Actually, however, its sales fell short of expectations. While Windows 95 did succeed in penetrating the market for business use, it failed to catch on among the young and elderly. Many people still find it difficult to manipulate PCs.

It was DoCoMo's i-mode that solved this problem, as a mobile phone handset is far easier to use than a computer.

The functions of i-mode, which enable users to access the Internet with a cell phone, have attracted customers.

Cellular phones are small enough to hold in the palm of one's hand and can be carried anywhere. The i-mode service represents the marriage of the Internet with the portability of cellular phones. This is why the number of

i-mode subscribers has continued to increase explosively and is closing in on 10 million.

Behind the success of the i-mode system is a story of NTT DoCoMo's unconventional personnel policy.

Oboshi Koji, then DoCoMo president, who hit upon the idea of offering non-voice services, felt that traditional voice services would peak in the not-too-distant future. He deemed it necessary to expand income from non-voice services.

To get the new project off the ground, Oboshi picked a relatively obscure company employee as the man in charge. He was Enoki Keiichi, the manager of a local branch in Tochigi Prefecture, who had caught Oboshi's attention for his assertiveness and unique ideas. Oboshi, currently NTT DoCoMo chairman, judged that Enoki was the best man to whom he could entrust the unique project.

When Enoki assumed the post, he found that NTT DoCoMo had a dearth of talent, so through his personal connections, he headhunted Matsunaga Mari, a female magazine editor with Recruit Co., as the leader of a team assigned the task of building i-mode's service content. With her feminine sensitivity and the knowhow she had acquired as a magazine editor, Matsunaga did all she could to find out what kinds of content would make i-mode successful. Numerous conferences were held with her staff. Their discussions often continued well into the night at a conference room-cum-social lounge nicknamed "Club Mari." There, members of her team talked all evening over drinks. The result was the building of a user-friendly operating system.

Meanwhile, Matsunaga scouted Natsuno Takeshi, one of her old acquaintances, who was running his own venture business after a stint in a major Japanese company. Natsuno had hardly joined DoCoMo when he began to distinguish himself among his colleagues, successfully closing deals with content providers and obtaining a large number of services needed to make the i-mode service attractive.

The Enoki-Matsunaga-Natsuno trio was the driving force behind the success of the i-mode team. Incidentally, the trio graced the cover of *BusinessWeek* magazine in January this year.

The scouting of mid-career workers, like the case of Enoki, Matsunaga and Natsuno, is inconceivable at DoCoMo's parent company NTT, once a government-owned company and notorious for its extremely conservative attitude. Though a subsidiary of NTT, DoCoMo is known for its flexible personnel policy promoted by chairman



Young woman pressing small buttons on her i-mode handset

Oboshi.

Oboshi's unique personnel policy was not limited to the scouting of the i-mode trio. He brought to the head office Masuda Tomoko, a female clerk at a branch office in suburban Tokyo's Tama district, because, in his recollection, "she appeared to have quite an interesting personality." Oboshi's hunch was right. Masuda lived up to Oboshi's expectations by coordinating a team of young employees which developed a cute terminal for ladies, named "Pocket Board," that is small

enough to fit in a handbag. The "Pocket Board" sold some 300,000 units in fiscal 1998 and became a hit product. This was another example of the success of Oboshi's scouting of talented people.

Meanwhile, DoCoMo President Tachikawa recalled that i-mode was initially a niche product developed only as an "addition." But it turned out to be a key player. Even so, DoCoMo officials still liken i-mode to the dessert of a dinner. "Our main dish is still voice communications," they say. But, DoCoMo's business targeted at the niche market turned out to be a great success.

NTT DoCoMo's i-mode is the envy of mobile carriers around the world, which are anxious to emulate the business model that allowed NTT DoCoMo to dominate the Japanese cellular phone market.

An executive of Fujitsu Ltd., a maker of i-mode handsets for DoCoMo, said that when he goes to Europe or the U.S. on a business trip, he can hardly talk with local businessmen without being asked about the secret of i-mode's success. European and U.S. business executives are taking a great interest in such a new technology developed in a small archipelago in the Far East.

There is no doubt i-mode will further attract the attention of the global communications sector. In the autumn or winter, i-mode handsets will incorporate Sun Microsystems' Java programming language. Java will add various functions, in particular vastly enhanced security functions, which in turn will make e-commerce more secure.

Starting in May next year, DoCoMo will launch its next-generation cellular phone service, called International Mobile Telecommunications 2000 (IMT-2000), in Tokyo and other major cities. IMT-2000 will substantially upgrade the communication speed of cellular phones and enable users to receive a vast amount of data and watch moving images and animated figures.

DoCoMo's launch of IMT-2000 and

incorporation of Java will mark the next stage for cellular phones, that is, cellular phones will become a powerful platform for e-commerce.

The introduction of IMT-2000 is expected to spread "mobile shopping," which will allow users to choose the commodities they want to buy by watching images or animations on their cellular phone handsets and pay on the spot. Use of Java will prevent leaks of payment data to other persons. While personal computer-based e-commerce currently poses various security risks, there are no such risks with the IMT-2000 service. The i-mode service will thus offer a promising platform for e-commerce in the future.

We are on the threshold of a new era when we can do any kind of shopping wherever we are.

PlayStation 2 is a powerful new game console developed by Sony Computer Entertainment Inc. (SCE), wholly owned by Sony Corp. and one of five strategic core electronics businesses of the Sony Group. SCE has about 1,000 employees.

PlayStation 2's engine is fitted with an ultra-high-speed processor enabling it to create film-like quality and depict subtle images and movements unthinkable in conventional personal computers. The "emotion engine" processor is produced by a joint venture between SCE and Toshiba Corp. at Toshiba's Oita factory. SCE chose to tie up with its rival Toshiba in order to make enhanced technology available for the project.

PlayStation 2 is also fitted with a digital versatile disc (DVD) player, one of the reasons for the console's blockbuster sales. Users of the original PlayStation console could only play games, whereas PlayStation 2 can also be used as a conventional DVD player, playing back movies or audio CDs. SCE executives say the DVD-savvy PlayStation 2 takes home entertainment to a new dimension. In other words, Sony's PlayStation has evolved from a gaming system (PlayStation) to an all-round home entertainment center (PlayStation 2).

Another noteworthy feature of PlayStation 2 is its impressive communications and networking functions. PlayStation 2 has an interface PC card slot similar to those used in conventional personal computers, which enables high-speed communications. SCE plans to market a communication PC card for PlayStation 2 next year. By installing the card, users will be able to surf the Internet. Other communications devices considered by SCE for PlayStation 2 are Internet functions offered by cable television operators and the asymmetric digital subscriber line (ADSL), which enables high-speed data transmission through existing telephone lines.

SCE plans to use PlayStation 2 as a stepping stone for marketing various digital software through the use of high-speed net connections, a service SCE calls "e-Distribution." The e-Distribution service will include the marketing of game and music software. Consumers will be able to buy digital contents from the comfort of their homes through broadband networks.

According to Sony's marketing strategy, e-Distribution will be launched in 2001, with PlayStation 2 connected to high-speed networks and a vast amount of files downloaded. The files will then be stored in an external hard disc connected to the game console.

The use of a super-high-speed communication line of 10 megabits per second will eliminate the need for discs, that is, game software and audio CDs will be downloaded instantly through optical fiber networks or CATV networks, SCE executives boast. They anticipate such an infrastructure will be in place in three to five years.

Downloading of software can of course be done by conventional PCs as well. But PlayStation 2 eclipses ordinary PCs in terms of sheer data processing power and user-friendliness. The widely used household game console has another advantage: it can double as a CD playback device.

PlayStation 2 was marketed on March 4 this year amid huge publicity and frenzied demand. Total shipments

topped 720,000 in the first two days and soared to 2 million units by May 24.

The original PlayStation debuted in December 1994, with 72,920,000 units shipped as of the end of last March – about 17 million in Japan and about 55 million in Europe and the U.S. Since the first-generation PlayStation was widely accepted throughout the world, its successor, PlayStation 2, will unmistakably dominate the global gaming market. When PlayStation 2 is launched in North America on October 26 with a price tag of 299 dollars, it is expected to fly off the shelves even faster than it did in Japan, with more than 1 million units expected to be sold in the first 24 hours.

The Sony Group plans to take advantage of the sizzling sales of PlayStation 2 as a springboard for online commerce throughout the world.

According to Sony officials, SCE's downloading business could eventually drive out packaged products marketed over the counter in the form of CD-ROMs or audio CDs. If the downloading of music becomes the norm, conventional CDs which store up to 70 minutes of music may be forced out of the market, since users would be able to listen to music of their choice, and artists would release their work free of the CD format.

Another feature of PlayStation 2 is its new function of offering person-to-person communication through a high-speed linkup. While game machines currently in use offer user-to-machine communication, PlayStation 2, through a linkup with a high-speed network, can offer upgraded fighting games with its enhanced processing capabilities.

Some game companies allow users to compete one-on-one through the Internet. But since they use low-speed Internet lines and PCs with limited graphic capabilities, game players cannot enjoy real-life communication.

SCE officials are convinced that the upgraded fighting games to be played on the PlayStation 2 terminal will become a new mode of entertainment, enabling game players to have enhanced human communications. "Human relations between game play-

ers will become very close. Players will be able to talk to each other while fighting a game over the Net. Communication potential will be unlimited with PlayStation 2," they explain. New technologies being developed by SCE will enable users to play games and communicate with anybody from their living rooms.

When SCE launched the development of PlayStation 2 back in 1997, some U.S. dealers questioned why SCE was trying to make a product that would likely disappear in the near future. The American dealers hit the nail on the head when they asked such questions, because at that time Microsoft's Windows 95, marketed in 1995, was reaching the apex of a boom and everybody believed that PCs would become an all-purpose magic machine featuring all kinds of functions such as television, mailing, telephony, and games. Many people predicted that PCs would expel many household electronics devices, including game machines, out of the market, if PC prices come down enough.

Contrary to their predictions, game machines are still with us, probably because many people found it difficult to handle PCs. PlayStation 2, ironically, threatens to replace PCs as the key player of the communications market. So does i-mode. The two products have something in common. They were both developed in Japan, caught on initially among young people and are user-friendly enough to replace PCs.

America's Microsoft marketed an enormous number of software packages of the Windows series in the latter half of the 1990s and dominated the PC software market. In the new millennium, Japan's i-mode and PlayStation 2 have a chance to take up the position once held by Windows. They hold vast potential unmatched by PCs. **JTI**

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