

# au Business

## Overview of services

KDDI's au business operates CDMA mobile services throughout Japan. au's CDMA 1X 3G data services, which capitalize on the benefits of 3G, are particularly popular. In just two years since the introduction, nearly 80% of au's total subscriber base has moved over to 3G. Besides email and Web access, au's *EZweb* Internet access service allows users to download a wide variety of mobile content at speeds of up to 144Kbps in a quick and convenient manner, including *EZ Chaku-Uta*®, or ringtone songs of relatively large audio files.

As of March 31, 2004

Services	Data transmission speed	Accumulated number of subscribers	Area coverage
3G CDMA 1X WIN	Max. 2.4Mbps	34.3 thousand	70%
3G CDMA 1X	Max. 144Kbps	13,166 thousand	90%
2G cdmaOne	Max. 64Kbps	3,450 thousand	99%

In November 2003, KDDI introduced more advanced CDMA 1X WIN 3G mobile services. Based on CDMA2000 1x EV-DO system, these data services offer access to broadband content at connection speeds of up to 2.4Mbps. Another innovation is *EZ Flat*, a fixed-rate tariff that allows users to make unlimited access to data packet communications for a competitively low price (¥4,200 per month). KDDI was the first carrier in Japan to introduce flat-rate 3G tariffs. This new pricing plan enables consumers to use their mobile handsets to access exciting broadband data services without worrying about the cost.

## Market trends and strategy

With high penetration rates for mobile phones, annual net addition has been shrinking in the Japanese market. Having said that, au achieved a remarkable 58.6% increase year-on-year in net subscriber growth in fiscal 2003 to 2.91 million. For the first time ever in the industry, au grabbed the leading share of net addition, which represented about half (49.6%) of the total. The key factors behind this achievement were an attractive product offering backed by a substantially strengthened brand. As 3G mobile services start to take off in Japan, KDDI has retained its early lead by offering a well-balanced mix of value-adding factors, as shown on the following page.





We couldn't wait for the future of 3G mobile communications to arrive. So we led the way.



#### 1. Attractive handset selection

The wide range of au 3G handsets available caters to everyone with the latest models, from advanced functions to simpler models. A broad selection of colors is also available.

#### 2. Exciting 3G content

The single greatest benefit of 3G technology is the ability to download broadband content at high connection speeds. au offers consumers a huge variety of content to take full advantage of this speed. For instance, *EZ Chaku-Uta*<sup>®</sup> service offers an evolved version of ringtone melodies with CD-quality sound, turning the content into a rich source of musical expression. 3G features also allow images of higher definition and smoother video-clip playback.

#### 3. Competitive pricing plans

The increased amount of data contained in rich content would translate into prohibitively high costs for users on the old charging system. Since these costs would have inhibited service take-up, KDDI introduced discount plans along with full-fledged deployment of 3G services to encourage users to fully enjoy the content.

#### KDDI's strengths (1): an evolutionary path to 3G network

One of the reasons why KDDI was able to make such a smooth and rapid transition to 3G from 2G was its adoption of the CDMA standard. Developed by the U.S. firm Qualcomm, CDMA offers carriers the twin advantages of network upgrade simplicity and



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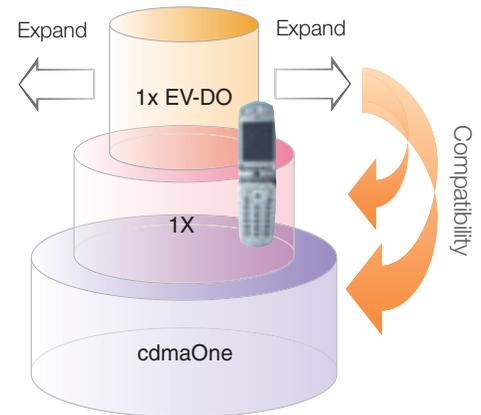
## More bandwidth means more fun and excitement.

backward compatibility. Upgrading the network to 3G simply involved replacing panel boards on the existing network of 2G base stations with no need to build out the 3G network from scratch, therefore vastly reducing the start-up capital costs for 3G. In turn, this allowed KDDI to charge 3G users lower rates. Also, customers can use their 3G handsets on the existing 2G CDMA network due to backward compatibility. This enabled au to offer nationwide coverage for 3G services from the outset, because the 2G cdmaOne service was available almost everywhere in Japan. For users, this was a key benefit.

### KDDI's strengths (2): flat-rate tariffs

Introduced with the latest au CDMA 1X WIN services, KDDI's flat-rate tariff for 3G mobile data services is an industry-first for Japan. This is made possible by CDMA2000 1x EV-DO technology, under which carriers between base stations and user handsets are exclusively allocated for data transmissions, thereby enabling connection speeds of up to 2.4Mbps. An additional advantage of the technology is that it offers optimized control over the data-transmission method used within range of each base station. If conditions permit and the connection is good, the method can be altered to upgrade the speed of data transfer. This feature, an advantage of CDMA2000 1x EV-DO technology, enables data transmission costs per bit to be reduced significantly while ensuring high-level network traffic control. The result is that users enjoy fast connections and stable reception even with an all-you-can-use plan.

### Backward compatibility of CDMA networks



Nationwide coverage possible with WIN handset from service outset



## EZweb contents

	<b>EZ Channel</b>	With the CDMA 1X WIN service, the <i>EZ Channel</i> Web feature functions as a broadcasting medium for original programs featuring full audio and video playback as well as text letters. Selected programs can be downloaded automatically overnight for customers to view at their leisure. Movie previews, music chart rankings and quiz programs are all proving popular selections.
	<b>EZ Movie</b>	This service allows users to download high-quality short movies onto handsets. The CDMA 1X WIN service permits downloading of movie shots of up to three minutes in length. Another popular service provides updates on traffic or weather conditions via real-time camera images.
	<b>EZ Chaku-Uta® (downloadable ring-tone songs)</b>	<i>EZ Chaku-Uta®</i> service provides downloads of 15-30-second song clips of CD-quality sound. From its launch to the end of March, 2004, this service notched up 70 million downloads, making it one of the leading au services and the driving force behind au's big leap. Customers can use the downloaded clips either as ringtones or simply enjoy listening to them.
	<b>EZ Appli</b>	This service allows users to download various applications to add games or other functionalities to handsets. Both JAVA™ and BREW™ applications are available.
	<b>EZ Navi Walk (GPS navigation)</b>	This street-navigation service based on GPS technology turns your phone into the portable equivalent of a car navigation system. The screen image scrolls automatically depending on walking speed and can be quickly enlarged or reduced. Users are alerted that they have reached a target destination by an audio signal or handset vibration.

### KDDI's strengths (3): applications development via BREW™

Most downloadable applications for cellular phones to date have been based on JAVA™. au is currently focusing on the new platform BREW™ developed by Qualcomm, which offers applications that run faster with lower memory than the JAVA™ platform. Therefore, BREW™ can be installed on both high-end and low-end handsets. This advantage makes BREW™ applications an add-on feature for the full range of au 3G handsets. Applications that have been developed to date include a wide range of games and new functions such as the GPS navigator, *EZ Navi Walk*. BREW™ technology also provides a platform for the development of customized functions for specific corporate mobile solutions. Of the 79 companies offering CDMA mobile phone services around the world, a total of 23 operators have already introduced BREW™\*.

\* as of March, 2004

### KDDI's strengths (4): increased sales of corporate mobile solutions

Using the au network and cellular services, KDDI offers corporate clients tailored mobile solutions based on customized systems and applications. These services can provide a convenient way of boosting office productivity. KDDI is also marketing packages of mobile solutions. The two main products are as follows.

#### (1) Mobile Office

Users can gain secure remote access to personal email, schedules, address books, files stored on company intranets and other information through an au mobile handset or a laptop PC.

#### (2) GPSMAP

This service enables users to pinpoint the location of all handsets fitted with GPS functions. Using an office-based computer, the locations of employees can be plotted on a map, and messages from the office can then be made available to workers on a real-time basis as required.

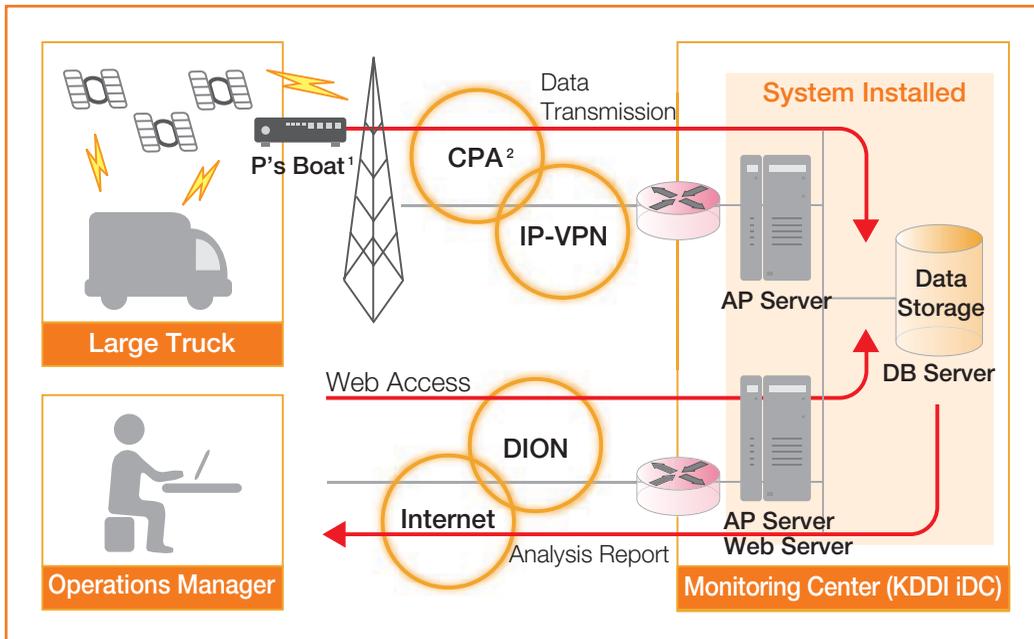
#### Development of ITS business

KDDI is applying the potential of mobile solutions to the ITS (intelligent transport systems) business. This goes beyond supplying communication services via cellular terminals installed into automobiles.

Working with auto and car navigation equipment manufacturers, KDDI is developing systems and platforms to offer a range of solutions.

Looking at some examples, KDDI has developed an au CDMA 1X module for the G-BOOK information network service that Toyota Motor Corporation offers to some car owners in Japan. KDDI has also developed an au communications module for use in an operational diagnostics system (*Mimamori-kun*) offered by Isuzu Motors Limited (See the chart on Page 19). This module allows drivers to do location searches using the GPS function and also to access real-time data over the Internet on fuel consumption, exhaust emissions, gears and vehicle acceleration.

## Mimamori-kun diagnostics system by Isuzu Motors



1. P's Boat: tele-metering terminal. 2. CPA: cdma Packet Access

## Mobile solution business examples

<p><b>Industry:</b> Delivery</p> <p><b>Objective:</b> Enhance logistics management</p> <p><b>Contract:</b> Approx. 6,500 au terminals + CPA + IP-VPN + Barcode</p> <p><b>Effect:</b> Enables data to be updated upon delivery at customer's site when required, eliminating need to return to store</p>	<p><b>Industry:</b> Clothing</p> <p><b>Objective:</b> Bolster sales management system</p> <p><b>Contract:</b> Approx. 1,000 au terminals + EZweblink<sup>1</sup> + IP-VPN + barcode</p> <p><b>Effect:</b> Increases management efficiency of sales information for 1,000-strong mobile phone store network</p>
<p><b>Industry:</b> Public transport</p> <p><b>Objective:</b> Gather bus service data</p> <p><b>Contract:</b> Approx. 200 in-vehicle terminals + CPA + IP-VPN</p> <p><b>Effect:</b> Enables information on bus location to be gathered and provided real-time, with expectation of future application in optimizing public transport census<sup>2</sup></p>	<p><b>Industry:</b> Medical</p> <p><b>Objective:</b> Enable database search of nursing staff</p> <p><b>Contract:</b> Approx. 120 au terminals + EZweblink + IP-VPN</p> <p><b>Effect:</b> Vastly improves efficiency and response time by enabling 24-hours search of nursing staff at 30 centers nationwide, eliminating need for patient referral via phone call</p>

1. EZweblink: remote access services. 2. Public transport census: Research survey related to nationwide road and traffic conditions.



## Reconsidering the mobile phone from a design perspective. Introducing new forms and new experiences.

### au design project

Handset designs have converged on the shell type during the past few years, and look much alike, as makers have striven to maximize the size of the screen display. Recognizing that mobile phones are a fashion item for many users, the "au design project" aims to create original concept models via collaboration with external designers. The first commercial models to emerge from the project were released in October 2003, about 2.5 years after its initiation. As its name suggests, the INFOBAR series uses colorful tiles on the bar-shaped handset as dialing keys. Its originality has made the series an instant hit with users and a major topic of discussion within the industry. The "au design project" will continue to produce novel handset designs, thereby contributing to the enhancement of the au brand.

#### Color selection for the INFOBAR handset series



NISHIKIGOI (Carp)



ICHIMATSU



BUILDING



ANNIN

# BBC & Solutions Business

## Overview of services

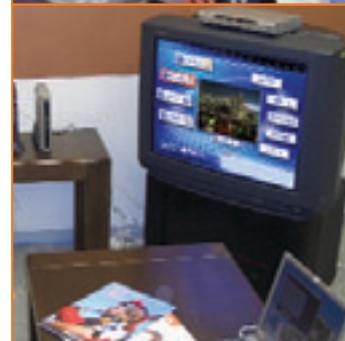
KDDI's BBC (Broad Band Consumers) & Solutions business offers a wide variety of fixed-line telecommunications services for individual and corporate customers. In the consumer sector, KDDI offers ADSL and other Internet access services (under the DION brand) besides conventional local, long-distance and international voice telephony services. New service developments in fiscal 2003 included the introduction in April 2003 of discount-priced IP telephone services as an add-on function to ADSL and the launch in October 2003 of the *KDDI Hikari Plus* service, which combines Internet access and IP telephone services with multi-channel broadcasts through a single optical fiber connection. The competitively priced IP telephony component of the *Hikari Plus* service notched up a first for Japanese carriers by offering the same sound quality as a conventional wireline connection while still allowing users to keep the same number as their NTT fixed-line connection (previously users had to change their number).

In the corporate sector, besides voice telephony and Internet access services, KDDI offers unique solutions, including data-center services and system integration. KDDI's aim is to supply a varied lineup of services to meet the specific needs of customers: for smaller corporate clients, KDDI is focusing on provision of IP-VPN (Virtual Private Network) services for the construction of intranets. In the market for larger firms, KDDI is centering on Ether-VPN for large-scale networks.

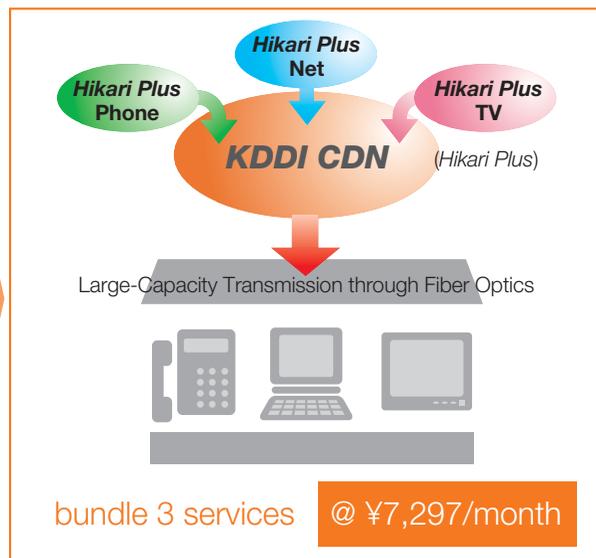
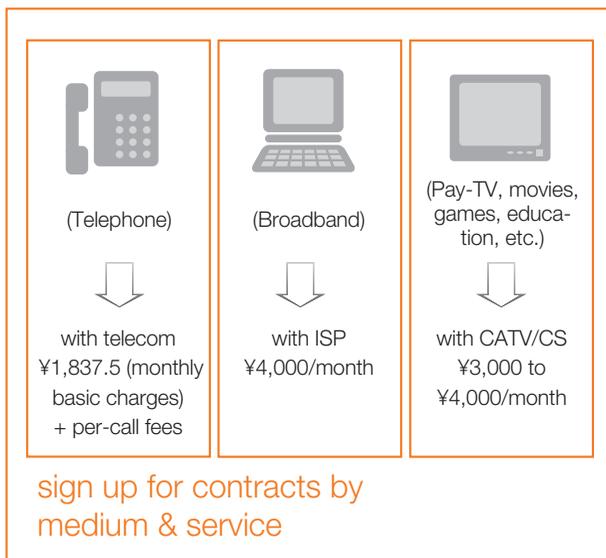
## Market trends and strategy

The wireline telephone market in Japan presents a special challenge for KDDI. Voice telephony continues to decline remorselessly amid a shift to mobile phones and email, and the rapid spread of ADSL has recently precipitated the contraction of the market for dial-up Internet access services. Fixed-line traffic is thus on an inevitable downward trend. In addition, the access charges paid to NTT increased in fiscal 2003. Higher connection fees are no small matter for KDDI, and substantially raise the cost burden for any carriers that relay their services over NTT lines. The policy change regarding retroactive settlement methods for these fees also poses issues for KDDI.

To generate fresh earnings growth within the wireline sector, KDDI needs to develop business models that do not depend on



## Consumer benefits of KDDI Hikari Plus service



the NTT network infrastructure. KDDI is shifting the focus of its business in this sector away from conventional voice telephony toward a broadband model centered on IP telephone services and data communications. *KDDI Hikari Plus* marks the first major broadband service initiative by KDDI that targets residential customers. This is an area of high potential growth, and KDDI is working to extend coverage to new service areas while boosting sales capabilities. KDDI plans to continue on its current course, focusing mainly on providing a variety of solutions using IP-VPN, Ether-VPN and other networks for the development of intranets.

### KDDI's strengths (1): full-scale development of *Hikari Plus* FTTH services

KDDI's *Hikari Plus* service is provided via high-capacity infrastructure which consists of a fiber-optic ultrahigh-speed access network and unique Content Delivery Network (CDN). This service is a three-in-one package: high-quality IP telephone services, ultrahigh-speed Internet access and a multi-channel television service. As of March 2004, KDDI is the only company in Japan offering such a bundled service. *Hikari Plus* service is highly competitive on price: the monthly fee of about ¥7,000 compares favorably with the combined cost of buying equivalent services from separate suppliers, which would be at least ¥10,000 per month. These features are well appreciated by customers. KDDI plans to devote

increased sales and marketing resources into this new *Hikari Plus* to expand market penetration. KDDI is also working to reduce the lead time to install fibers into condominium and apartment blocks.

### KDDI's strengths (2): increased sales of ADSL+IP phone services

Targeting individual residential customers who do not live in large apartment blocks, KDDI continues to expand sales of ADSL services under the DION brand. The subscriber base for DION ADSL services passed the one million mark in February 2004. KDDI is positioning ADSL as its main service offering for residential broadband until the advent of full-scale FTTH in Japan. The sales promotion strategy is to bundle ADSL Internet access with IP telephony services. Besides being the first carrier to offer connection speeds of maximum 40Mbps, KDDI also offers customers a menu of choices that includes a low-priced service offering speeds up to 1Mbps. KDDI's aim is to offer customers a range of services to cater to varied user preferences. KDDI also offers customers free PC set-up at the time of initial subscription so that the service can be up and running quickly. KDDI also applies detailed touches, such as assigning female support personnel to female customers who request this option. This attention to detail has gained KDDI many plaudits.

# TU-KA Business

## Overview of services

KDDI's TU-KA business is operated by three cellular-phone subsidiaries that provide PDC-based services in the three Japanese regions of Kanto (Tokyo and surrounding areas), Tokai (Nagoya area) and Kansai (Osaka/Kyoto/Kobe area). Unlike au, the TU-KA business does not possess a 3G license, and concentrates on supplying low-priced 2G mobile services. TU-KA users, like au users, can also get access to email, Internet, ringtone melody download and other basic content-based data services through *EZweb*. The service is targeted principally at those users who are only interested in a simple mobile phone service based around voice and email. KDDI has focused on providing innovative handset designs to appeal to such users. These include: a new sonic speaker that cuts out extraneous noise by transmitting sounds to the ear through facial bones (shown on the next page); designs for seniors that emphasize ease of portability; and a handset that is just 15mm thick, achieved through the elimination of bulky advanced functions. This functional simplicity aimed at satisfying specific user needs clearly differentiates the TU-KA business from au.

## Market trends and strategy

Although 3G is in its expansion phase in Japan, this does not imply that everybody wants a mobile phone with the latest state-of-the-art 3G functions. KDDI estimates that customers wanting just the basic functions from a mobile phone make up a considerable portion of the total user population. Many of these users are in the 40+-age bracket. Partly because their usage frequency is low, they tend to want to use the same model for a much longer period than the average younger user (who typically uses the phone a lot and switches to a new model regularly). These user characteristics permit the development of a low-cost business model. For instance, there is no need to upgrade the network beyond 2G. Hence, the TU-KA business is one geared to cash generation from a steady profit stream and has a positive effect on KDDI Group finances.

Based on the key concept of "simplicity," TU-KA focuses on easy-to-use handsets with basic functions. Hence, instruction manuals that used to have an enormous number of confusing pages explaining the advanced functions are now much simpler. TU-KA also emphasizes simplicity in its charge structure, and





## Easy to use with streamlined functions. ‘Simplicity’ is the key for TU-KA 2G models.

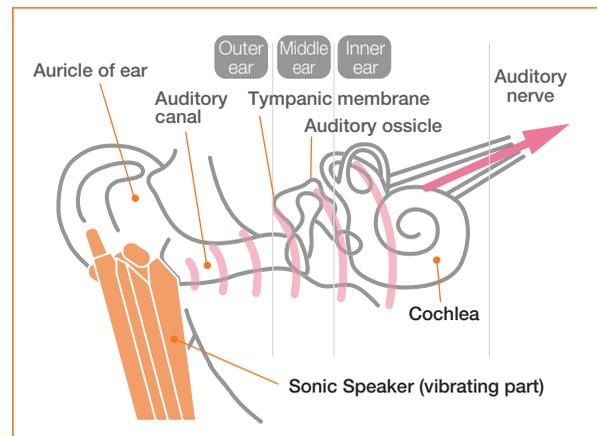
was the first operator to introduce discount plans, offering lower rates for two-year contracts. Under the scheme, all basic charges are covered by call charges. In terms of function, usability and pricing plans, TU-KA offers services that are extremely easy for customers to understand and appreciate. Although subscriber numbers remain on a downward trend, KDDI is focusing on achieving further reductions in the churn rate by offering simplified services to boost customer satisfaction.



### The bone-conductive speaker phone

In January 2004, TU-KA recorded a world-first by launching the TS41 handset, a mobile phone fitted with a speaker that works on the principle of bone-conduction. This device converts audio signals into vibrations that are then transmitted through the bones in the jaw and up through the skull of the user to the inner ear (cochlea). By holding the handset to the face, the user can “hear” the conversation via these bone-transmitted vibrations. One major benefit of sending the auditory information through this unique and rather different route is that it allows the user to filter out other sounds outside the ear, which makes the conversation much clearer when there is a lot of background noise.

### How the bone-conductive speaker system works



# Pocket (PHS) Business

## Overview of services

KDDI subsidiary DDI Pocket offers nationwide mobile communications service based on the PHS standard, which was originally developed in Japan. The main service offered by DDI Pocket is AirH™, an internet access service designed for laptop and notebook PCs and other portable devices such as PDAs. Users insert a card that acts as a mobile data communications terminal, offering internet connection speeds of up to 128Kbps throughout Japan. A range of terminals is available to support various interfaces for mobile devices. DDI Pocket was the first service operator in Japan to offer a monthly flat-rate tariff for unlimited mobile internet access using AirH™. Although the service is not as fast as 3G mobile services in terms of connection speeds, users can benefit from discounted rates because the network costs are significantly lower. The focus on providing services exclusively for laptop PCs and PDAs also clearly differentiates DDI Pocket's marketing position within the KDDI Group's mobile operations.





## KDDI's wireless communications technology enables business anywhere, anytime.

DDI Pocket also wholesales its capacity to MVNOs (Mobile Virtual Network Operators). There are currently six such resellers operating in Japan, who provide value-added services of their own using DDI Pocket's infrastructure.

### Market trends and strategy

Although DDI Pocket suffered a contraction in its overall subscriber base in the year ended March 2004, the number of corporate AirH™ users increased. The chief advantages of the AirH™ service to corporate clients are flat-rate tariffs, which aid in

budgeting, together with a variety of solutions developed for the corporate market; for instance, handset-type PHS phones can be used as house phones in the offices. The DDI Pocket network infrastructure is geared to corporate users, with improved service coverage and throughput in city-center areas. The high level of support services offered by DDI Pocket also attracts corporate clients. Another advantage of PHS services is that the electric wave is weaker than other mobile services, which prevents the signals from causing damaging interference with medical equipment. This makes PHS ideal for mobile communications within hospitals, which have become a niche demand sector for DDI Pocket.

A key element in the future strategy is to attract more users for PHS data communications services by raising connection speeds. DDI Pocket is preparing to introduce technology that would double the network connection speed to 256Kbps from its current maximum of 128Kbps.



### Concerning the Transfer of DDI Pocket's PHS Business

It was decided by the Board of Directors on June 21, 2004, that the entire operations of DDI Pocket, a subsidiary of KDDI, will be separated and merged into a Consortium, in which The Carlyle Group, Kyocera Corporation and KDDI invest. An escrow agreement was concluded on the same day (refer to page 49 for further details). Under the agreement, the company that succeeds DDI Pocket's business will be 10% owned by KDDI. Intentions are to continue developing this key business partnership via service offerings and joint marketing efforts.