

# **Introduction of IP-based Fixed-Line Phone Network**

KDDI Corporation

**September 15, 2004**

# **Plan for IP-based Fixed-Line Phone Network**

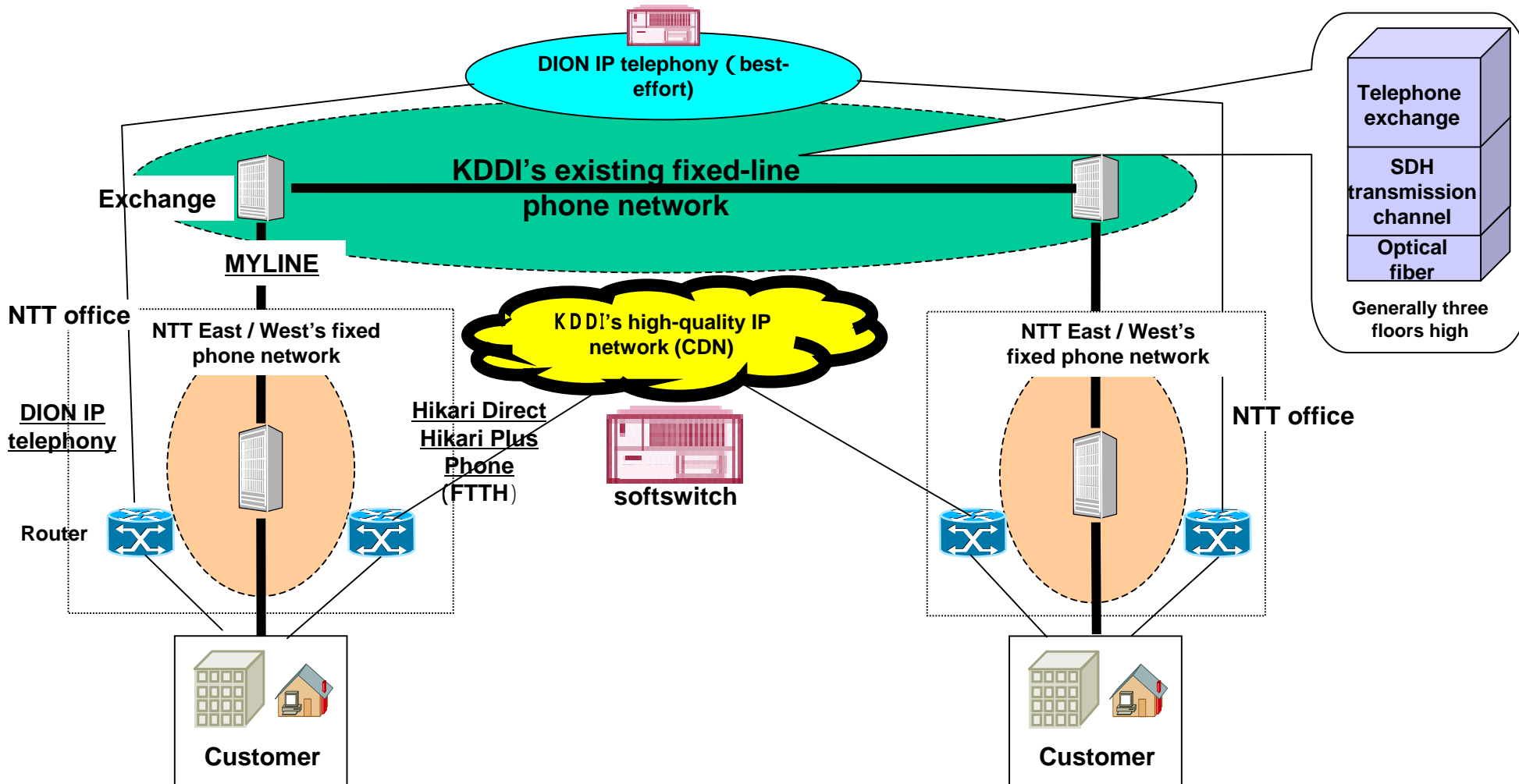
**KDDI has long intended to build an advanced telecommunications network using IP technology, and in October 2003 launched “KDDI Hikari Plus,” a three-pronged service utilizing FTTH to provide TV and video, high-speed Internet and high-quality IP telephony.**

**On the other hand, estimates\* indicate that by fiscal 2007 more than 20 million households will rely solely on phone service and will use subscriber phone lines (metal lines). \*Based on KDDI’s research**

**KDDI will beat the industry in completing its IP-based fixed-line phone service to extend affordable service using IP technology to customers who do not use broadband.**

## Current Network

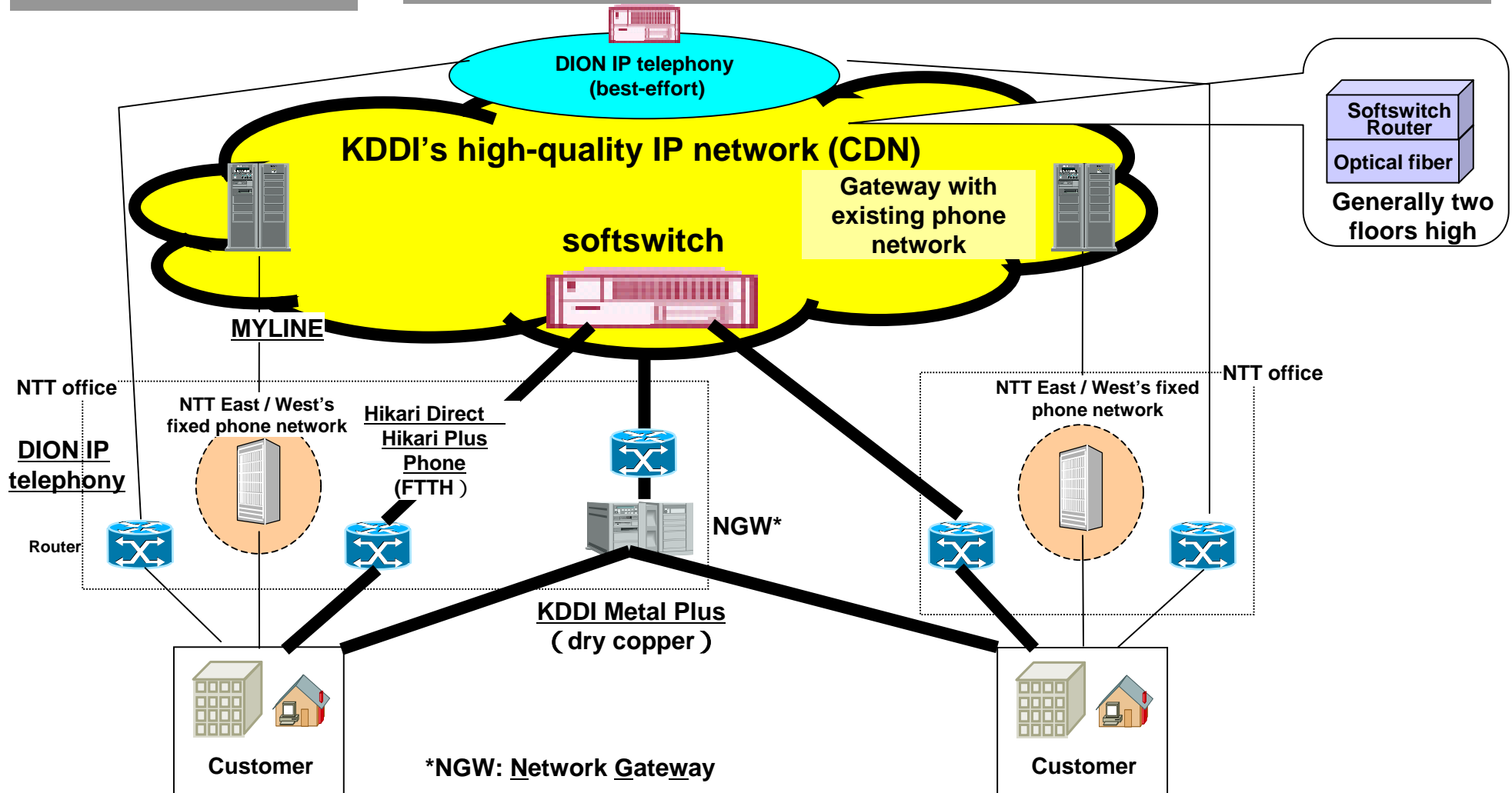
Phone service primarily provided through the existing fixed-line phone network  
 KDDI's Hikari Plus Phone is provided through CDN\*



\*CDN (Contents Delivery Network) integrates data and voice, prioritizing the transmission of voice over data so that the quality of the telephone calls are equivalent to that of existing fixed lines.

**Network After Switch to IP-based System**

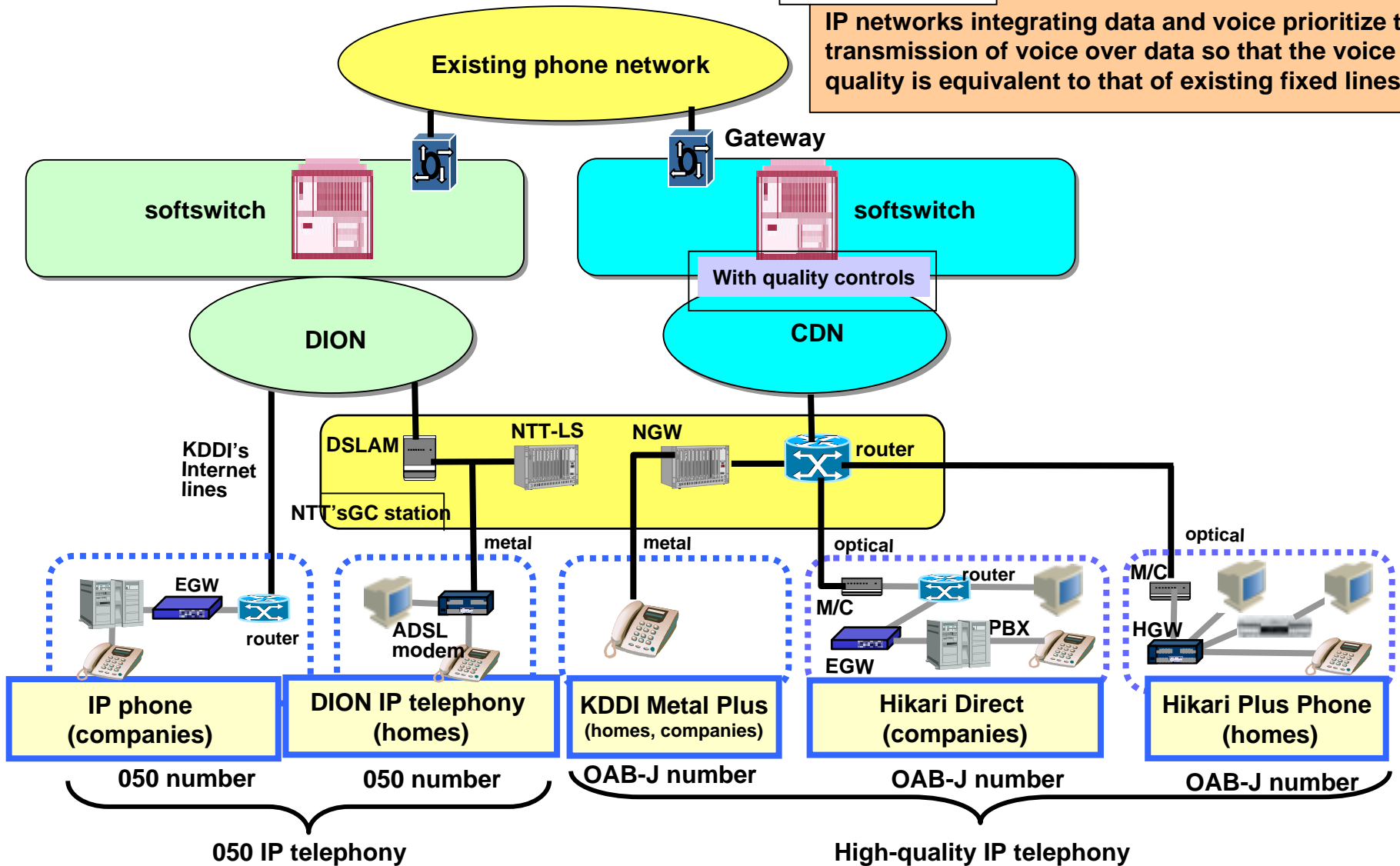
Expand CDN, the backbone of Hikari Plus, and replace existing fixed-line phone network with softswitch  
 Provide customers with direct connections through Hikari Plus, Hikari Direct and Metal Plus



# Differences Between 050 IP Telephony and High-quality IP Telephony

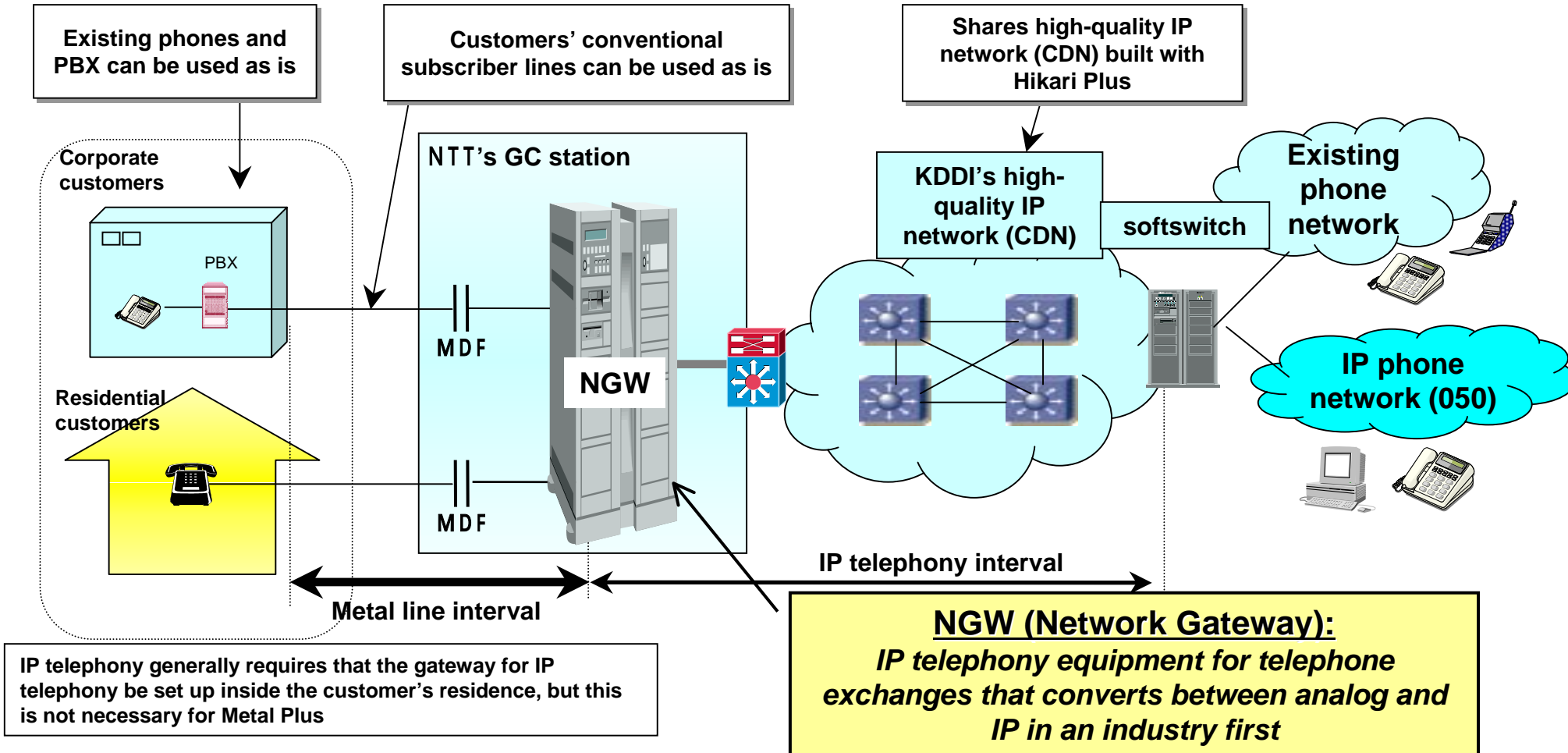
**Quality Control:**

IP networks integrating data and voice prioritize the transmission of voice over data so that the voice quality is equivalent to that of existing fixed lines.



# Configuration of KDDI's Metal Plus Facilities

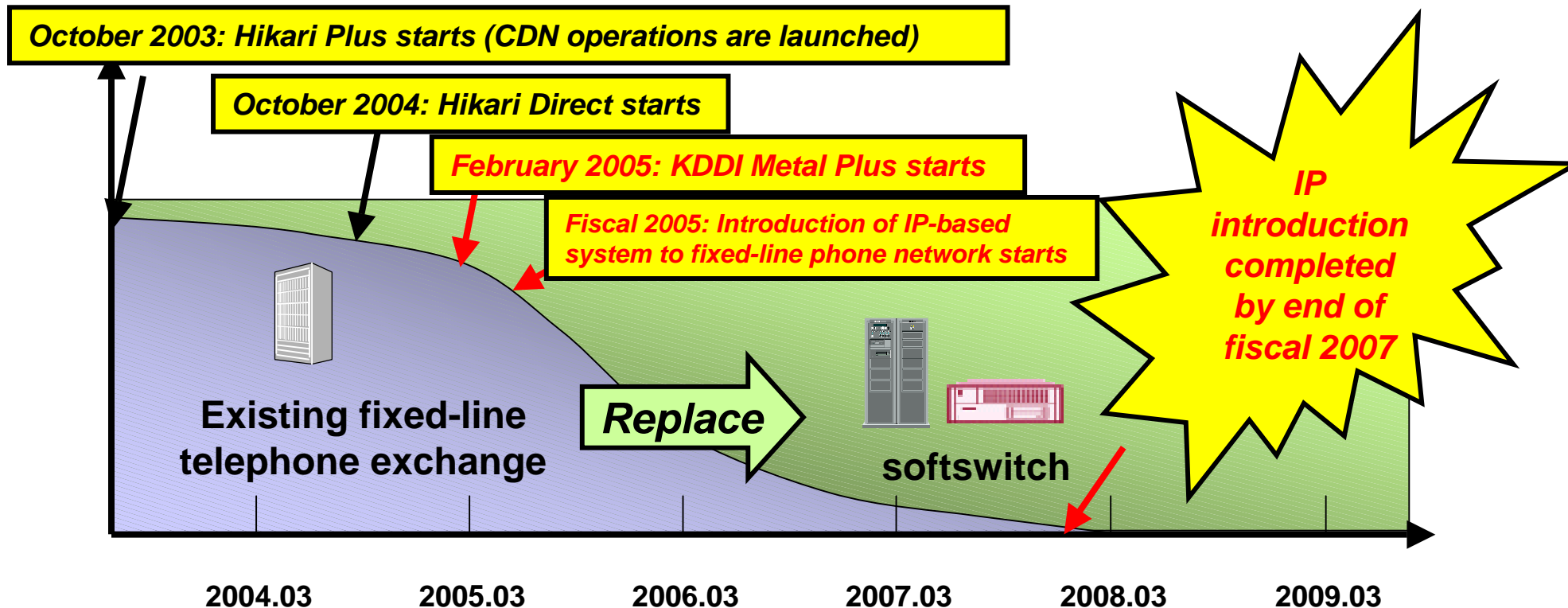
Customers' subscriber phone lines (metal lines) are connected directly to KDDI's high-quality IP network  
 Basic fees include domestic, international and mobile phone costs, creating a comprehensive service



The introduction of an IP-based system to the existing fixed-line phone network will begin in fiscal 2005, and the replacement with softswitch will be completed by the end of fiscal 2007

The introduction of IP to the fixed-line phone network will make it easier to adopt new IP telephony services

Provide customers with direct connections to reduce NTT access charges





**KDDI Metal Plus**

**Even customers with a single phone that do not use broadband will be able to use this affordable phone service based on cutting-edge IP technology**

**The direct access new phone service using metal lines (dry copper) require no work from the customer and can be used after KDDI makes a simple change**

<b>Service name</b>	<b>KDDI Metal Plus</b>
<b>Launch of Services</b>	<b>Customers may sign up from December 2004 and service will start in February 2005</b>
<b>Service Area</b>	<b>Services will start in the Tomeihan area and gradually expand nationwide, with the coverage rate to exceed 60% in early fiscal year 2005</b>
<b>Sales Targets</b>	<b>Residences and companies</b>

## Five Main Features of New Service

1. Basic charges are not by service area but standardized nationwide.
2. Push-button phone line will be offered as basic function.
3. The IP-based system makes call charges more affordable and simple.
4. The bill for basic charges and call charges are consolidated.
5. Telephone subscription rights are not needed

## Functions comparable to fixed lines

1. Current telephone number (OAB-J number) can be used as is (number portability)
2. Customers can dial emergency numbers (110, 118, 119)
3. Phone can be used even in power outages
4. Additional functions can be used (Caller ID, number notification request, blocks on crank calls, call waiting and other additional services, as well as services equivalent to voice warp, dial-in and line combinations, will be provided. )

## Residences

<b>Basic charge</b>	1,500 yen per month (1,575 yen with tax) * Charges are standardized nationwide (no differentiation between service areas), includes push-button phone functions
<b>Installation charge</b>	100 yen per month (105 yen per month included) *applies to the first 60 months after installation
<b>Connection charges</b>	8 yen/3 minutes for local calls, 15 yen / 3 minutes for long-distance calls (8.4 yen / 3 minutes and 15.75 yen / 3 minutes including tax)
<b>Additional services</b>	Same as NTT East / West

## Companies

<b>Basic charge</b>	2,400 yen per month (2,520 yen with tax) * Charges are standardized nationwide (no differentiation between service areas), includes push-button phone functions
<b>Installation charge</b>	100 yen per month (105 yen per month including tax) *applies to the first 60 months after installation
<b>Connection charges</b>	8 yen/3 minutes for both local and long-distance (8.4 yen / 3 minutes including tax)
<b>Additional services</b>	Same as NTT East/West

**IP-based fixed-line phone system will be completed by the end of fiscal 2007, resulting in greater efficiency and lower costs**

**Introducing cutting-edge IP technology will enable customers not using broadband to take advantage of this more affordable service**

**KDDI considers the customer's perspective.**

**Adding KDDI Metal Plus to the line-up of Hikari Plus and Hikari Direct will result in a total service meeting customers' diverse needs.**

**KDDI Metal Plus, a high-quality IP telephony service, does not bill basic charges by service area, but has standardized these charges nationwide.**

**IP means that connection charges are no longer based on distance, making charges more simple.**

			Residential Use			
			Metal Plus	Otoku Plan	NTT Subscriber Phone	
Monthly Charges	Fixed Charges	Basic Charge	Standardized 1,500 yen (1,575 yen incl. tax) Included Push-button Phone Charge	Class 3 1,550 yen (1,627.5 yen incl. Tax) Class 2 1,400 yen (1,470 yen incl. Tax) Class 1 1,350 yen (1,417.5 yen incl. Tax)	Class 3 1,750 yen (1,837.5 yen incl. Tax) Class 2 1,600 yen (1,680 yen incl. Tax) Class 1 1,450 yen (1,522.5 yen incl. Tax)	
		Installation Charge	100 yen (105 yen incl. Tax)	100 yen (105 yen incl. Tax)	-	
		Charges for Additional Services	Push-button-Phone Charge is free	Push-Phone 390 yen (409.5 yen incl. Tax)	Push-Phone 390 yen (409.5 yen incl. Tax)	
	Other charges are the same as NTT		Caller ID 400 yen (420 yen incl. Tax) Cut-in 300 yen (315 yen Incl. Tax)	No. Display 400 yen (420 yen incl. Tax) Call Waiting 300 yen (315 yen Incl. Tax)		
	Connection Charge	Local	8 yen (8.4 yen incl. Tax)	8.5 yen (8.925 yen incl. Tax)	8.5 yen (8.925 yen incl. Tax)	
		Long Distance	Standardized nationwide 15 yen (15.75 yen including tax)	20 - 80 yen (21 - 84 yen incl. Tax) Maximum 50% Discount	20 - 80 yen (NTT Communications) (21 - 84 yen incl. Tax) Variety of Discounts Available	
		Week-day daytime 3min.	27 yen	180 yen Maximum 50% Discount	160 yen (NTT communications) Variety of Discounts Available	
		To Mobile Phone	to a u 51 yen (53.55 yen incl. Tax) Others 54 yen (56.7 yen incl. Tax)	75 yen (78.75 yen incl. Tax)	54 yen (NTT Communications) (56.7 yen incl. Tax)	
	Cost for facility & equipment			-	-	72,000 yen (75,600 yen incl. Tax)

only applies to the first 60 months after installation.

\* The table above represents the fees as of September 15, 2004.

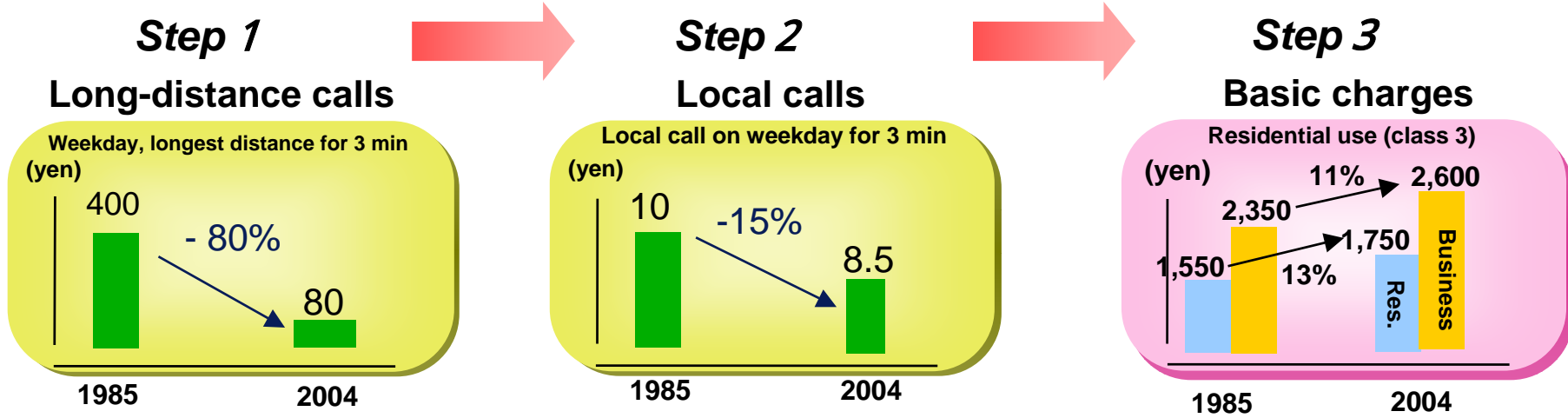
			Corporate Use			
			Metal Plus	Otoku Plan	NTT Subscriber Phone	
Monthly Charges	Fixed Charges	Basic Charge	Standardized 2,400 yen (2,520 yen incl. tax) Included Push-button Phone Charge	Class 3 2,400 yen (2,520 yen incl. Tax) Class 2 2,250 yen (2,362.5 yen incl. Tax) Class 1 2,100 yen (2,205 yen incl. Tax)	Class 3 2,600 yen (2,730 yen incl. Tax) Class 2 2,450yen (2,572.5 yen incl. Tax) Class 1 2,300 yen (2,415 yen incl. Tax)	
		Installation Charge	100 yen (105 yen incl. Tax)	100 yen (105 yen incl. Tax)	-	
		Charges for Additional Services	Push-button-Phone Charge is free	Push-Phone 390 yen (409.5 yen incl. Tax )	Push-Phone 390 yen (409.5 yen incl. Tax)	
	Other charges are the same as NTT		Caller ID 1,200 yen(1,260 yen incl. Tax) Cut-in 300 yen (315 yen Incl. Tax)	No. Display 1,200 yen(1,260 yen incl. Tax) Call Waiting 300 yen (315 yen Incl. Tax)		
	Connection Charge	Local	8 yen (8.4 yen incl. Tax)	8.5 yen (8.925 yen incl. Tax)	8.5 yen (8.925 yen incl. Tax)	
		Long Distance		20 - 80 yen (21- 84 yen incl. Tax) 55% Discount	20 - 80 yen ( NTT Communications) (21 - 84 yen incl. Tax) Variety of Discounts Available	
		Week-day daytime	27 yen	180 yen 15% Discount	160 yen ( NTT Communications) Variety of Discounts Available	
		3min.		To Mobile Phone	54 yen (56.7 yen incl. Tax)	54 yen ( NTT Communications) (56.7 yen incl. Tax)
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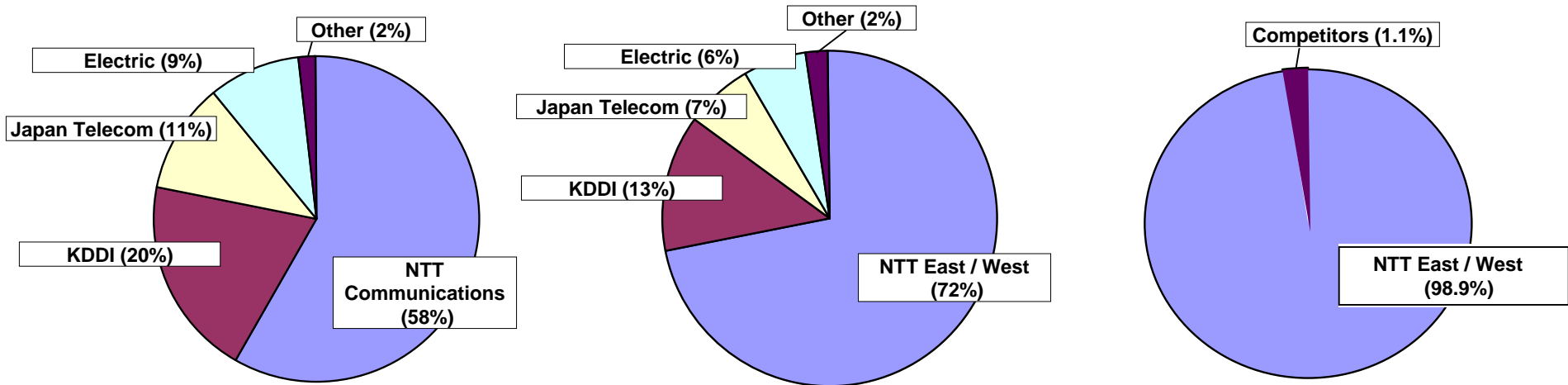
\* The table above represents the fees as of September 15, 2004.

1. Customer fees have dropped dramatically for services facing increasing competition.
2. On the other hand, customer fees for services facing little competition are on an uptrend.

Status of customer charges



Status of competition (changes in market share)



\* Share of MYLINE and MYLINE Plus subscribers (those not subscribing are not included in the share)  
\* Figures reflect subscribers as of the end of July 2004 (Source: MYLINE Carriers Association's web site)

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\* Figures are current as of March 31, 2004 (Source: Ministry of Public Management, Home Affairs, Posts and Telecommunications)