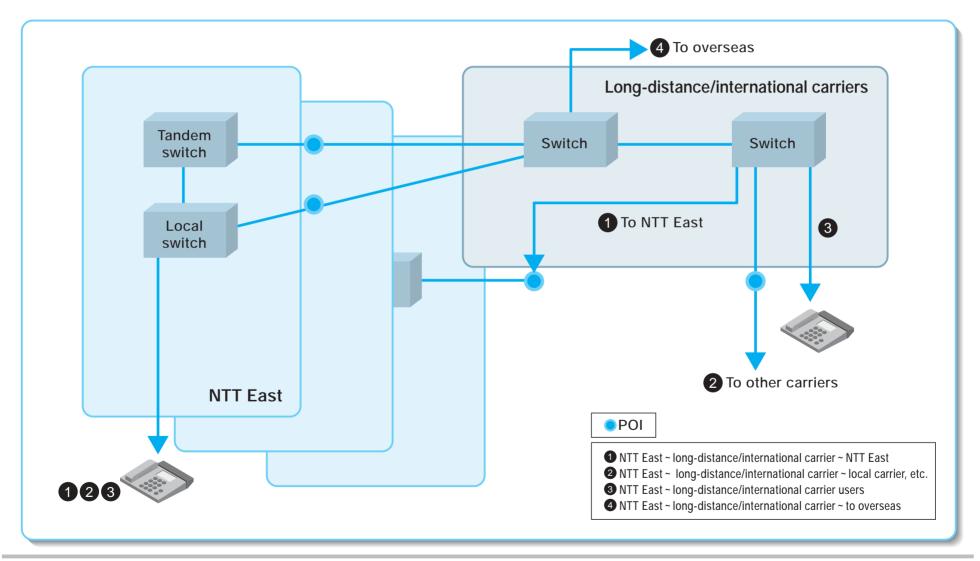


Telephone Network Interconnection

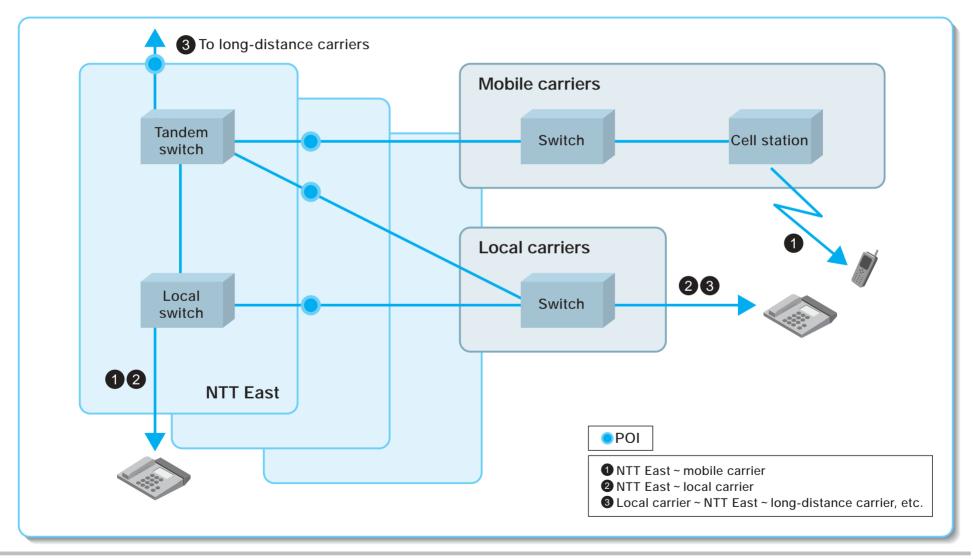
- 1 Typical Patterns of Interconnection: Example of Interconnection with Long-Distance and International Carriers

The typical pattern of interconnection with long-distance and international carriers is shown below:



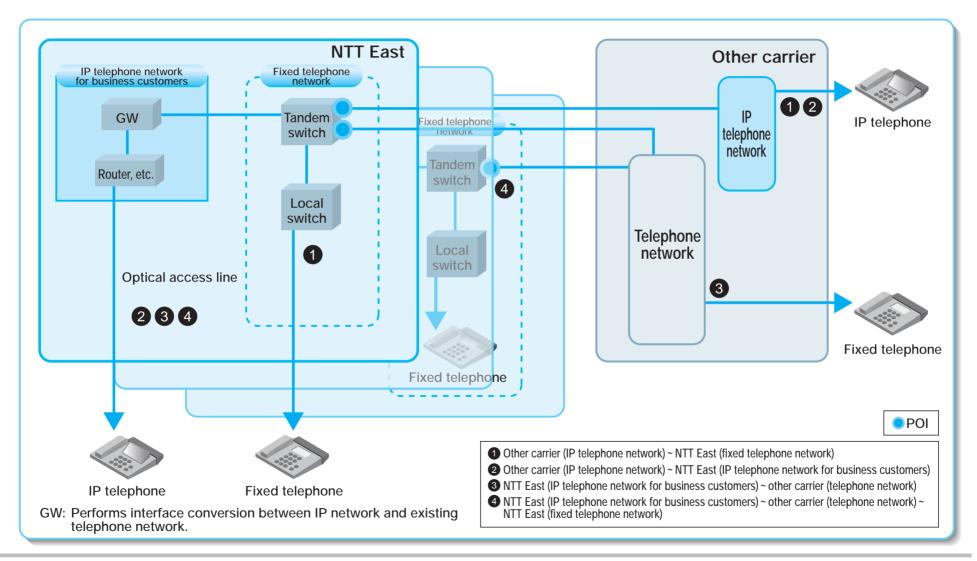
- 2 Typical Pattern of Interconnection: Example of Interconnection with Mobile and Local Carriers

The typical pattern of interconnection with mobile and local carriers is shown below:



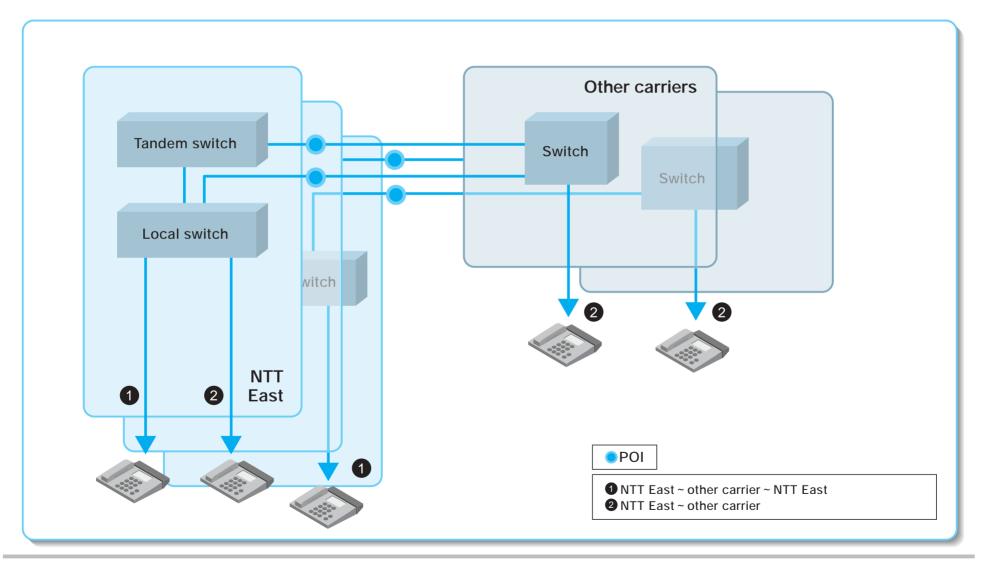
- 3 Typical Pattern of Interconnection: Interconnection with IP Telephony Carriers

The pattern of interconnection to IP telephony carriers and IP telephony for our business customers is shown below.



- 4 Typical Pattern of Interconnection: Example of Interconnection by Use of Multiple Standard Points of Interconnection

The use of multiple standard points of interconnection makes it possible to provide a variety of services.

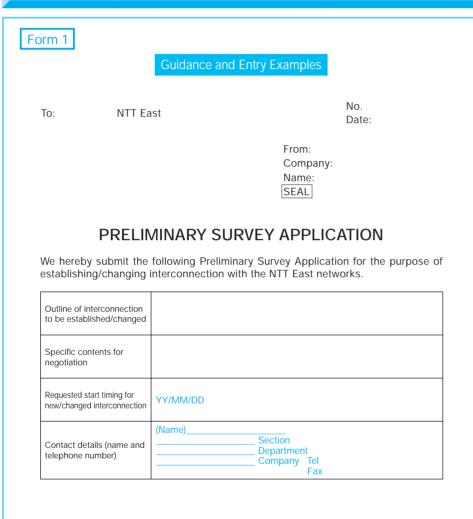


- 5 Major Functions That Become Available by Telephone Network Interconnection

We will provide the following major functions, etc., based on the requests by other carriers.

Major Function	Outline of Function
Transmission line allocation function for local switch and leased circuit node equipment interconnection (DSM-I)	Function to carry out discretional route setting on the basis of 1.5-Mbps units in multiple multiplexed input and output transmission signals.
Transmission-line interconnection usage functions (TCM local switch interconnection)	Function to carry out multiplex conversion of interfaces (52 Mbps/156 Mbps) in local switch interconnection.
Tandem switch alternate route interconnection function for overflow calls in local switch interconnection	Function to automatically shift to tandem switch alternate routes for overflow calls, which cannot be transmitted due to failures, etc., at the time of local switch interconnection.
Synchronization signal supply function	Function to supply clock signals generated by our clock generation equipment to synchronize telecommunications facilities.
Local switch menu usage function	Function to make it possible to provide optional added services by using our local switch from the service control point (SCP) of other carriers.
Carrier pre-subscription function	Function to enable telephone users to use the carrier they have selected by pre-registration without dialing the carrier identification code. For details, please refer to the " -1 Provision of Carrier Pre-Subscription Function" in this Chapter.
Number portability	Function to enable users to change the telecommunications carrier from which service is received, to another telecommunications carrier without changing the telecommunications number that is assigned to the user. For details, please refer to the " -1 Provision of Number Portability" in this Chapter

- 6 Entry Examples of Various Application Forms Concerning Telephone Network Interconnection



the	dance and Entry Exam ontents for Negot		Please specify interconnection poin among those specific Paragraph 1, Article the Articles of Agreen
1. Points of Interconnection			
Points of interconnection specified in the Articles of Agreement	Example 1) (3), Paragraph 1, Article 5 d Equipment for Local Switch) Example 2) (1) (Subscriber Line End) a Switch), Paragraph 1, Article 5 of the A Example 3) Same as current status	nd (4) (Transmission Ec	
Points of interconnection other than those specified in the Articles of Agreement	Example) As specified in Attachment 1 Articles of Agreement Are Not Applied). Please complete	in case of requesting
2. Demarcation point for telecommunic.	Please specify the request POI installation site(s).	other than those	at points of interconnection specified in Paragraph 1, rticles of Agreement.
(1) Requested POI installation site	Example 1) Within NTT East's I Example 2) Within our Building Example 3) In our manhole to be insta	Building (address)	
3. Area subject to interconnection			
 Service area of applicant carrier subject to interconnection Area subject to interconnection per POI mplete in case of new ecton with NTT East's 	Example 1) Scope in which our compe Management, Home Affairs, Posts and POI: Our network interconnection area: NTT East's network interconnection ar	I Telecommunications Example 1) Our Example 2) Our Ka	service area nto sales area i area
Please describe area subject to interconnection per POI with respect to your network and NTT East's network.	POI: Our network interconnection area: NTT East's network interconnection ar	Example 1) Our ser Example 2) Our Ka rea: Example 1) Hokkai	nto sales area
4. Technical conditions for interconne	ction (physical, electrical and logic	al conditions)	
Addition of new technical conditions	Yes No		
Interconnection based on the technical conditions specified in the Articles of Agreement.	Chapter XI (Technical Conditions) in th As specified in Pattern Sectic Pattern), Collection of Technical Cond However, Paragraph is applied for	n, Chapter 2 (Tech itions.	nical Conditions by
ease specify technical inditions specified in the Please circle an	Signaling network configuration	Associated network	Quasi-associated network
ticles of Agreement. entry for each.	Signaling speed	4.8kb/s	48kb/s
omplete in case of requesting ection based on technical	Priority originating-user reservation Bi-directional reservation	Yes	No
s other than those specified in es of Agreement.	Bi-directional reservation	Yes	No
Interconnection based on technical conditions other than those specified in the Articles of Agreement	As specified in Attachment 1 (Tech Articles of Agreement Are Not App		Cases in Which the

- 6 Entry Examples of Various Application Forms Concerning Telephone Network Interconnection

Guidance and Entry Examples

Specific Contents for Negotiation (2/2)

							for each POI (number of
5. Construction of telecommunicat	ions facilit	es		traffic, numbe	er of peak hour ca	ails, n	umber of peak day calls
 Capacity of switching and trans facilities per POI Applicant carrier facilities to be within NTT East buildings (if an Type, quantity, dimensions of fac be installed Electric power requirements Other installation conditions 	collocated y)	The dimensions o	the eq al insta this e	NTT East build Demarcation p uipment to be allation of two quipment are:	ing under (1) Req point for telecomm used is the sa units of "XX" e H x W	me a equip	is that presently oment is requested.
6. Patterns of interconnection							
Patterns of interconnection specified in the Articles of Agreement	Articles of Agreement	Chapter VII (Patte Attached Table 2-	rns of 2, No.	Interconnectio ~ No	on)		
specify the pattern of interconnection	Articles of Optional Agreement	Chapter VI (Patter Attached Table 2-			n)		
Patterns of interconnection other to specified in the Articles of Agreem		As specified in At					attern of interconnection
7. Functions subject to network me	odification	charges patter	n other	han those specif	ied in the Articles	of Ag	reement.
Functions requested by applicant carrier f those subject to network modification cha							tion Charges), 1.2 Charges), Articles
Outline of functions requested by applicant than those subject to network modification		Example) Functio facilities and thos facilities.				teleo	
8. Matters requiring operational co (1) Matters for which NTT East cooperation i (matters other than those stipulated in the Ar Agreement in case the Articles of Agreement	s requested ticles of	Please outline th requesting the us the Articles of Ag	e of a f	unction not inclu		Sper Moc (Inte	cified in 1.2 (Network dification Charges), Table erconnection Charges), A greement.
9. Carrier identification code and ty	pe of cod	e		1		·	
Carrier identification code		()	()	()
Domestic basic and domestic value-added service	e; shared use						
Domestic value-added and international value-added se	vice; shared use						
Domestic basic and international basic service	; shared use						
International basic service; exclusive us Please enter a check mark in any of the "domestic basic service; exclusive use," or "international value-added service; ex	four rows fo and check	the second row in t	ficatio ne cas	n code. Please e of "domestic	e check the firs c value-added	t row servi	v in the case of ce; exclusive use"
10. Carrier pre-subscription function							
Usage of carrier pre-subscription f		es or No					
Call category		Local calls	Intra	a-prefecture toll calls	Inter-prefect toll calls	ure	International calls
Carrier pre-subscription number					ton calls		
Service area							
11. Other		1	I		L		
		Example 1) Please pro Example 2) In submitt secured from "XX" Co	ng this			releva	nt consent has been

Attachment 1 Guidance and Entry Examples Please use this form in case any section ncludes any technical condition that is NOT ered by the Articles of Agreement and/c **Technical Conditions** the Collection of Technical Conditions for Cases in Which the Articles of Agreement Are Not Applied Specific Contents Technical Conditions (1) Point of interconnection Subscriber line end b. Subscriber line transmission equipment CL ocal switch transmission equipment d. Tandem switch transmission equipment e. Leased-line node transmission equipment f. Signaling tandem switch transmission equipment Please select the appropriate item. No change in present interconnection point. . Other Please specify the type(s) of terminal in your company' network that uses the functions. Applicant carrier network side (2) Types of function-using terminals (Example 1) Subscriber telephones and ISDN terminals NTT-East network side (a) Subscriber telephone (b) General public telephone (c) ISDN terminal Please select the appropriate item (D) ISDN public telephone e. Other () Please specify the interfac No change in present function-using terminals equipment to be used. (3) Transmission equipment Example 1) 52-Mb/s or 156-Mb/s digital interface by interoffice line interface using SDH interface (4) Signaling system a No.7 common-channel signaling system in conformity with TTC standards b. I-interface c. Interface between PHS public cell station and digital network d. No change in present signaling system e. Other (5) Signaling network a. Associated network (b) Quasi-associated network configuration (6) Signaling speed a. 4.8kb/s (b) 48kb/s c. No change in present signaling speed d. Other (7) Numbering system a 0 + ABCDE + FGHJ 0: toll prefix; ABCDE: area code + local exchange number; FGHJ: subscriber number Please select th b. 00XY + 0 + ABCDE + FGHJ appropriate iter 00XY: carrier identification code; 0: toll prefix; ABCDE: area code + local exchange number; FGHJ: subscriber number c. $00XY + x \sim x + (1 \sim n)$ 00XY: carrier identification code; x ~ x: service code d. 00XY + x ~ x 00XY: carrier identification code;x ~ x: international number, etc. e 0A0 + CD + FEGH I Please specify the NTT East etwork function na 0A0: service identification code; CD: carrier identification code; EFGHJ: subscriber number which you request f. No change in present numbering plan. q. Other ((8) Interconnection with Example 1) Request interconnection with the Free-Dial access function NTT-East services Example 2) Request interconnection with the police and fire-fighting service access functions (9) Billing Example 1) Charging for ANM (charging indicator set as charging Charging conditions Example 2) Same as present conditions Please specify the charging conditions

Attachment 1

- 6 Entry Examples of Various Application Forms Concerning Telephone Network Interconnection

Guidance and Entry Examples

Technical Conditions	Specific Contents
Charging-start/ stop timing	Charging-start timing:ⓐ Upon receipt of ANM (charging indicator set at charging) b. No change in present charging-start timing c. Other
Please select the appropriate item.	Charging-stop timing:
Calls not subject to charging	Onsuccessful calls b. Test calls c. Calls encountering facility faults, etc., that affect charging d. No change in present subject calls
Please specify the statement description and settlement methods.	e. Other
(10) Settlement between carriers (Statement description and settlement method)	Example) Statement description: the total billing amount including said access charges Settlement method: monthly bank transfers per account and date designated by NTT East statement
(11) Test methods Please select the appropriate item.	a. Manual interconnection test: Confirming good/bad connection by providing automatic answering trunk function to IGS and NCC-GS and manually conducting connection testing from both ends. b. Circuit activation access test: Upon line activation, confirming the name of the line, line number and good/bad calls between originating-switch outgoing side and terminating-switch norming side. C. Manual signaling route test: Confirming normal signaling link d. Circuit matching test: Matching circuit status to eliminate inconsistencies Ø No change in present test methods f. Other
(12) Congestion control functions	In conformity with Article 56 of the Articles of Agreement (Restrictions on Interconnection Messages) No change in present control methods
Please specify the method of securing essential communications.	c. Other
(13) Securing essential communications	Example 1) Implementing priority calling party reservation circuit control in order to secure essential communications
(14) Other Please specify any other matters to be considered in negotiations concerning technical conditions.	Example 1) Additionally using "1111110" in "b) Number type indicator, 3.8 Calling party number" in item (2) c., Paragraph 1, Article 18 of the Collection of Technical Conditions

Guidance and Entry Examples

Patterns of Interconnection

		Column 1	
	Originating Carrier	Transit Carrier	Terminating Carrier
1	Our company		NTT East
2	NTT East		Our company
3	Our company	NTT East	Local carrier
4			

	Column 2	Column 3	Column 4
	Carrier Setting User Charges	Carrier Billing User Charges	Carrier Paying Usage-Sensitive Access Charges
1	Our company	Our company	Our company
2	NTT East	NTT East	-
3	Our company	Our company	Our company
4			

- 6 Entry Examples of Various Application Forms Concerning Telephone Network Interconnection

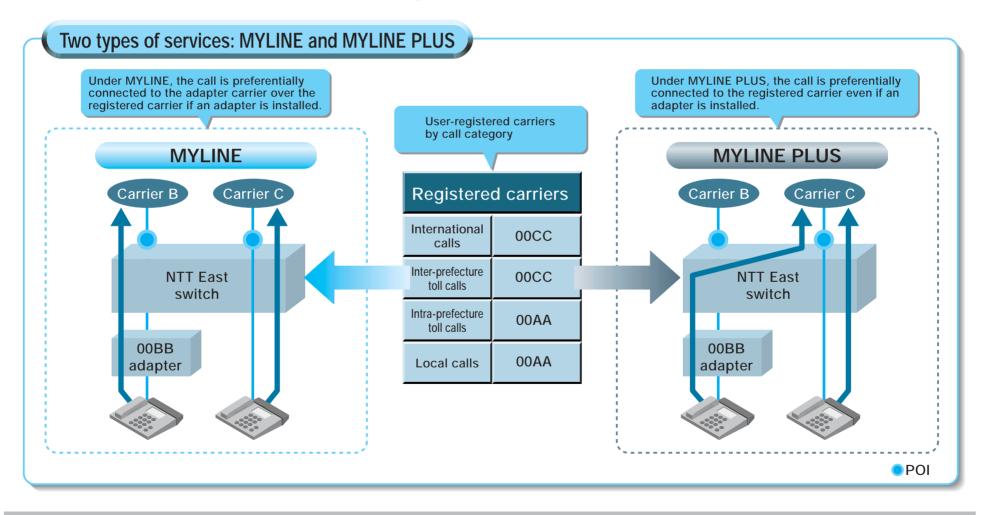
o: NTT East			No. Date:
		From: Name:	Company: SEAL
	POI SURVI	EY APPLICATION	N
		POI survey be undertaken	as follows.
We here . Survey request		-	as follows.
		POI survey be undertaken Requested interconnection start timing	as follows. Remarks
. Survey request	contents	Requested interconnection	

Guidance and Entry Examples

Area	name (building name)	"XX" Building 🦯		lease complete in case of
	ned service start	Leased line service	YY/MM/DD	ased-line service.
timin	g	Telephone service	YY/MM/DD	Please complete in case of telephone service.
	Transmission	NTT East	"XX" Building (name of transm	nission LE)
	section	NCC	"YY" Building (name of transm	nission LE)
	Transmission syste	em	Example 1) F-600M system Example 2) SDH 156 Mb/s	
	Number of transmission	At time of service start	Example) 1+1 SYS (present us	se + backup)
	systems	At end of planned installation		
T	Interconnection sp	eed	Example) STM0/STM1	
nsn	Antenna type, qua	ntity		Please specify the dimensions of each equipment unit to be installed
issi	Facility outline	External dimensions	H x W x D (m) within the NTT East building.
on F	Please specify the heat generation	Total weight	kg/m²	Please specify the weight
Transmission Facilities	volume of each equipment unit.	Heat generation volume	Example 1) About "OOO" kcal Example 2) About "OOO" W	I/h per unit area.
05		Required capacity	Example) - 48V ± 4.8V	Please specify the voltage standards for each
Plea	ase specify whether the ipment complies with	Voltage standards	Example) Within DC ± 5V	equipment unit.
VC	Cl standards.	Electromagnetic induction	VCCI compliance Yes	No
	Air-conditioning	Temperature conditions	Example) 25 ± 15	
	outline	Humidity conditions	Example) 65 ± 20%	
	Power facility	Power source	Example) DC-48V	
	outline	Supply conditions	Example) UPS needed	Please specify any conditions for power reception.
		Type of grounding	Example 1) Communications (Example 2) Type arrester gr	
Ę.	Number of routes			ase specify the number of cable lead- outes to the NTT East building
ne/u	Number of conduit	ts	Example) One conduit	butes to the NTT East building
undergr	Number of cables		Example) One cable	ase specify the number of cable lead-
Line/underground	Number of cable c	ores	Example) 20 cable cores	conduits to the NTT East building.
nd	Type of cable core		Example) SM (Single Mode)	Please specify the number of cable lead-
Other	Please specif of cable lead- NTT East buil	ins to the Plea	ise specify the type of e core	in cores to the NTT East building.

- 1 Provision of Carrier Pre-Subscription Functions

Carrier pre-subscription functions make it possible for callers to use the selected telecommunications carriers without dialing the carrier identification code by registering the selected telecommunications carriers in advance at the NTT East local switch. Specifically, these functions involve a carrier selection service (MYLINE) and a carrier designation service (MYLINE PLUS), both of which services were started in May 2001. In addition, a carrier name notification function was added in May 2002.



- 2 Providing Carrier Pre-Subscription Service

Participation in the Carriers Association of Dialing Parity (MYLINE Carriers Association)

In order to contribute to the smooth introduction of carrier pre-subscription service to secure fair competition, to implement P/R activities for carrier pre-subscription service, to provide voluntary responses to claims made by users, and to discuss the problems raised by carriers concerning fair competition, etc., a Carriers Association of Dialing Parity (hereinafter referred to as the "MYLINE Carriers Association") has been established. In establishing your participation in the MYLINE Carriers Association, please indicate the names of personnel designated as the committee member, expert committee member, member of the WG and SWG as shown in the "FAX Sheet" Exhibit and send it to NTT East.

Submitting registration information to the MYLINE Center

Applications from users for carrier pre-subscription service are accepted at the MYLINE Center. Carriers wishing to register as carriers using pre-subscription service are requested to submit an "Application for MYLINE Center Carrier Registration" at least two months prior to the start of carrier pre-subscription service.

In addition, please submit "area code information" with respect to the start timing of carrier pre-subscription service for area code information at least two months prior to the start of carrier pre-subscription service.

In this connection, the Reception WG Secretariat of the Carriers Association of Dialing Parity will separately provide detailed explanations with respect to entry procedures.

Points to Consider

With respect to providing carrier pre-subscription service, please follow all procedures determined by the Preparatory Committee for the Introduction of Carrier Pre-Subscription Service and the Carriers Association of Dialing Parity.

By the time the service is started, please obtain the consent of the relevant local carrier(s). If such consent is not obtained in time, we may be forced to postpone the start of service.

Major costs in providing carrier pre-subscription service

[•]In order to register the 00XY number, expenses for translator-related work are required. In this connection, there is no cost exclusively required for the carrier pre-subscription service. (However, the costs of constructing the environment needed to connect to the reception system are to be borne by the carrier.)

^{•[}Access Charges] Per-connection expenses for carrier pre-subscription functions (please refer to 2-2 (3) of the Articles of Agreement) are required. (Such costs will be billed together with the ordinary access charge (AC).)

^{• [}Expenses for Procedures] Changing the category and number of the carrier pre-subscription service for any call category is subject to the expenses for procedures for carrier pre-subscription service acceptance (please refer to 2-1 (14) of the Articles of Agreement). (Such costs will be billed by the MYLINE Center. We will separately bill the user for the MYLINE registration fee.)

(Reference) Application Form for Participation in the MYLINE Carriers Association

Attachment	Secretariat MYLINE Carriers Association	
framework determined by the Study Group. • Any problems arising in the MYLINE Carriers	s Association s Association tudies are being carried out in each WG under the Association with respect to the rules for the entire elated carriers will be presented to the Study Group. ssociation mbers) rs Association the members) Publicity WG International SWG	FAX Sheet Date: YY/MM/DD Due Date: MM/DD Due Date: MM/DD To: Secretariat of the MYLINE Carriers Association, Telecommunications Carriers Association FAX: 03-3502-0992
	Specifications WG	Company Name:
Committee Confirmation of discussion results members Presenting problems to the Study Group Reporting and confirming results in each WG committee members Presenting the problem to the Study Group	Member Secretariat Meeting Cycle Carriers using carrier pre- subscription service (carriers that have a carrier Talecommunications Carriers Whenever necessary identification code) and which wish to participate in the MYLINE Carriers Whenever Association Whenever necessary	Contact Person: TEL:
Reception WG •Preparing reception processing flow •Establishing Reception Center •Responding to inquiries and complaints from users [Information] Information SWG •Establishing procedural rules for data exchanges between the Reception Center and carriers. Publicity WG •Implementing publicity activities for all users •Preparing and maintaining P/R schedule	Carriers participating in NTT regional Whenever carrier pre-subscription company (Fast) necessary	Participation in the WGs and SWGs:
Resoling problems concerning sales activities International Publicizing new procedures for international calls, SWG	service interconnection. KDDI	Company name:
Cost WG Clarifying the methods of allocating the costs	NTT regional company (East)	Division name:
Specifications •Resolving problems concerning specifications to WG be encountered in the future	NTT regional company (East)	
However, WGs and/or SWGs may be added or abolished as determined		Name:
	articipate in the MYLINE Carriers Association as om among mobile, PHS, CATV, and carriers, and	TEL: FAX:
Carriers Association are required to list the persor member, and member of each WG and SWG on the content of the second	service and that wish to participate in the MYLINE nnel for committee member, expert committee he attached FAX Sheet and send it to the ter applying to the relevant NTT regional company in. eported are as follows. committee member, and an expert committee member y WG, Cost WG and Specifications WG	Email:
		17 NTT C

(Reference) Application Form for Participation in the MYLINE Carriers Association

To: NTT East NTT West Date: VV/MM/DD

"XX" Company

Date: YY/MM/DD

To NTT East

"XX" Company

Area code information

"00"ZA

Area Code	Area	Start Timing YY/MM/DD

MYLINE Center Carrier Registration Application

	Item		Description Column Notes	Description Column	Registration Category	Setting Value Update Date
able	Carrier Identification	Local calls	Within 7 half-sized characters		New	
etting	Code	Intra-prefecture toll calls	Within 7 half-sized characters		New	
formation		Long-distance calls	Within 7 half-sized characters		New	
		International calls	Within 7 half-sized characters		New	
	Label type used for CMT	Label type	Enter "JIS" or "IBM"		New	
	Carrier abbreviated	Abbreviated name 1	Within 15 full-sized characters		New	
	name	Abbreviated name 2	Within 15 full-sized characters		New	
		Abbreviated name 3	Within 15 full-sized characters		New	
		Abbreviated name 4	Within 15 full-sized characters		New	
		Abbreviated name 5	Within 15 full-sized characters		New	
		Abbreviated name 6	Within 15 full-sized characters		New	
		Abbreviated name 7	Within 15 full-sized characters		New	
		Abbreviated name 8	Within 15 full-sized characters		New	
		Abbreviated name 9	Within 15 full-sized characters		New	
		Abbreviated name 10	Within 15 full-sized characters		New	
		Abbreviated name 11	Within 15 full-sized characters		New	
		Abbreviated name 12	Within 15 full-sized characters		New	
		Abbreviated name 13	Within 15 full-sized characters		New	
		Abbreviated name 14	Within 15 full-sized characters		New	
		Abbreviated name 15	Within 15 full-sized characters		New	
		Abbreviated name 16	Within 15 full-sized characters		New	
		Abbreviated name 17	Within 15 full-sized characters		New	
		Abbreviated name 18	Within 15 full-sized characters		New	
		Abbreviated name 19	Within 15 full-sized characters		New	
		Abbreviated name 20	Within 15 full-sized characters		New	
		Abbreviated name 21	Within 15 full-sized characters		New	
		Abbreviated name 22	Within 15 full-sized characters		New	
		Abbreviated name 23	Within 15 full-sized characters			
		Abbreviated name 24	Within 15 full-sized characters			
		Abbreviated name 25	Within 15 full-sized characters			
		Abbreviated name 26	Within 15 full-sized characters			
		Abbreviated name 27	Within 15 full-sized characters			
		Abbreviated name 28	Within 15 full-sized characters			
		Abbreviated name 29	Within 15 full-sized characters			
		Abbreviated name 30	Within 15 full-sized characters			
	Caller telephone number	Caller telephone number	Within 15 full-sized characters		New	
	for dial-up connection	Reason	Enter within the cell			
	User ID for RADIUS	User ID	Refer to the following		New	
	authentication	Reason	Enter within the cell			
	User ID for FTP server	User ID	Refer to the following		New	
	authentication	Reason	Enter within the cell			
	User ID for Web server	User ID	Refer to the following		New	
	authentication	Reason	Enter within the cell			
	Global IP address at the		Enter within the cell		New	

1 Please limit Description column entries as specified under Description Column Notes.

2 Please enter "New," "Change" or "Deletion" in Registration Category column.

 Please use the format YYYMMDD in entering for the "Setting Value Update Date" (Example: January 10, 2001 2001010).
 As user ID passwords for RADIUS authentication, FTP server authentication and WEB server authentication are provided directly to the person responsible for network information liaison, advance registration is essential. The password for FTP server authentication is issued every month, and passwords for RADIUS authentication and WEB server authentication are issued every year by the MYLINE Center.

5 User ID issuing standards (: essential items) Must consist of half-sized alphanumeric characters.

Two or more alphabetic characters are included.

Must consist of at least six but fewer than eight characters. • The selected IDs must be combinations that are difficult to guess by unauthorized person (this particularly applies to those for FTP server authentication).

. The same ID may be used for RADIUS authentication, FTP server authentication and WEB server authentication

First and to they be used to include automatication, if if server automatication and inclusive server automatication.
6 Please specify the reason for any requested change in user TBb. Change requests without a stated reason may not be accepted.
7 The global IP address at the time of WEB referals is used for WEB server access control, and access is permitted from the applicable IP address.
In general, please enter a global IP address such as that of a proxy server, cic. In case of two or more proxy servers, please separate each address by a semi-colon (Example: 10.0.0.1;1).

8 Please submit this form at least one month prior to registration and any change request.



Other carrier

switch

Call

terminating

Call terminating

Incoming call

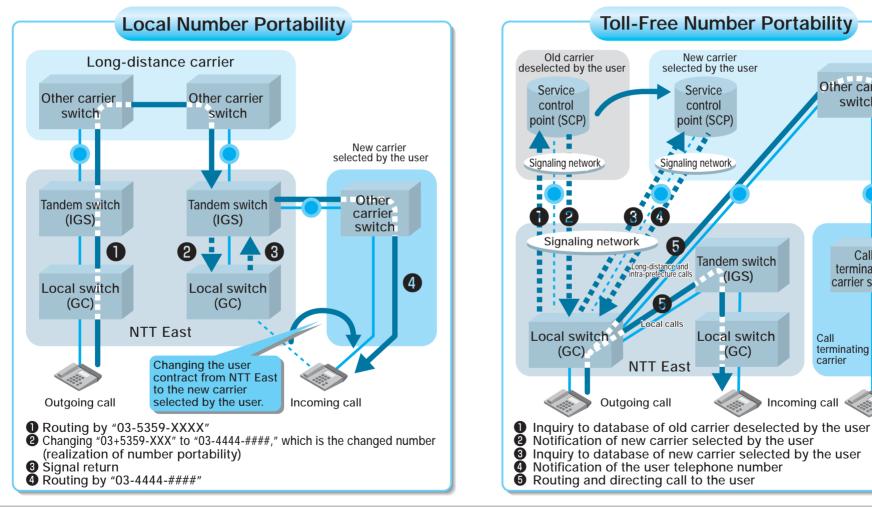
carrier

carrier switch

Provision of Number Portability

Number portability makes it possible for users to change telecommunications carriers from which service is received without any change in the telephone number, etc., which has been assigned to the user.

There are two types of number portability: "local number portability," which applies to numbers used for general subscriber telephone or ISDN service, and "toll free number portability," which applies to numbers used for toll-free service (numbers starting with 0120 or 0800). These services were started in March 2001.



- 2 Entry Examples of Number Portability Usage Application Forms

NTT East	No. Date:
	From: Company: Name:
We hereby submit the fo	NARY SURVEY APPLICATION ollowing Preliminary Survey Application for the /changing interconnection with the NTT East networks
Outline of interconnection to be established/changed	Realization of number portability for general subscriber telephones and ISDN service
to be established/changed Specific contents for	telephones and ISDN service

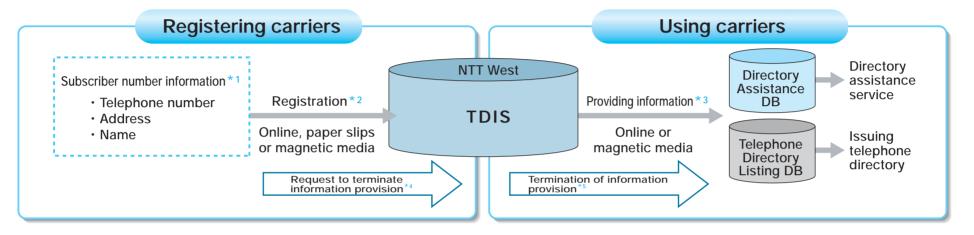
1. Points of Interconnection					
Points of interconnection specified in the Articles of Agreement					
Points of interconnection other than those specified in the Articles of Agreement					
2. Demarcation point for teleco	mm	unications facilities			
(1) Requested POI installation site					
 Area subject to interconnect 	ion				
(1) Service area of applicant carrier subject to interconnection	of F	Scope approval our company has obtained from the Minister of Public Management, Home Affairs, Posts and Telecommunications			
(2) Area subject to interconnection per POI		Our network interconnection area: NTT East's network interconnection area:			
4. Technical conditions for inte	rcon	nection (physical, ele	ectrical and logica	I conditions)	
Addition of new technical conditions Yes No					
Interconnection based on the technical conditions specified in the Articles of Agreement.					
		aling network configuration	Associated network	Quasi-associated network	
		naling speed	4.8kb/s	48kb/s	
		Priority originating- user reservation Bi-directional reservation	Yes	No	
		Bi-directional reservation	Yes	No	
Interconnection based on technical conditions other than those specified in the Articles of Agreement					
5. Construction of telecommun	icati	ons facilities			
 Capacity of switching and transmission facilities per POI Applicant carrier facilities to be collocated within NTT-East buildings (if any) Type, quantity, dimensions of facilities to be installed Electric power requirements Other installation conditions 	(1) (2)	general sub	s of traffic volume, etc., oscriber telephones and o acceptable.)	concerning number portab d ISDN service. (Using a se	

- 2 Entry Examples of Number Portability Usage Application Forms

Articles of Optional Agreement onnection									
specified in reement									
ect to networl	<pre>< modification</pre>	charge	es						
d by applicant those subject tion charges									
uested by han those lification charges									
ng operationa	l cooperation								
iich NTT-East requested									
ation code ar	nd type of cod	е					•		
ion code	(00X1Y	1)	(0	0 X 2	Y 2)	()
; shared use									
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(Reference) Provision of Directory Information Database (TDIS)

Carriers registered under the directory information database (TDIS) consist of carriers including NTT East and NTT West that have their own subscriber base, and mobile carriers. The registered number information (telephone number, address and name) is being used by telephone directory service companies and telephone directory issuing companies.



Explanation

- *1 In accordance with the laws and ordinances such as the "Guidelines Concerning the Protection of Personal Data in the Telecommunications Business (No. 570, Notification of the Ministry of Posts and Telecommunications, 1998;" hereinafter referred to as the "Personal Data Protection G uidelines, Etc."), the subscriber number information shall be limited to that separately specified by NTT East within the range necessary to implement telephone directory listings or directory assistance service.
- *2 Except the following cases, we will register subscriber number information.
 (1) In the event that the relevant contracting carrier fails or may likely fail to pay access charges stipulated in (4), 1.1.2.8 (Directory Assistance Function, Etc.), 1.1 (Access Charges), Table 1 in the Tables of Charges, or the expenses for procedures stipulated in Article 68 (Obligation to Pay Expenses for Procedures) of the Articles of Agreement.
 - (2) In the event that the contracting carrier fails or may likely fail to observe the following provisions in handling the subscriber number information to be registered. a The contracting carrier shall make it possible for its subscriber to select whether or
 - not to list such information in the telephone directory or provide same under directory assistance service. (In this case, the carrier may allow the subscriber to select whether to provide such information only by directory assistance service.)
 - b In the event the subscriber selects not to list such information in the telephone directory or to provide same under directory assistance service, the contracting carrier shall not request the registration of such information in our Directory Information Database.
 - c In the event the subscriber selects to provide such information under directory assistance service only, the contracting carrier shall request the registration of such information in our Directory Information Database only by limiting its purpose to directory assistance service.

- d In the event the subscriber asks the contracting carrier to register such information, the carrier shall request the registration of such information in our Directory Information Database without delay.
- e In addition, the contracting carrier shall observe the Personal Data Protection Guidelines, Etc.
- *3 Except the following cases, we will provide subscriber number information stored in our Directory Information Database.
 (1) In the event that the contracting carrier (including carriers using subscriber number information stored in the Directory
 - Information Database under contracts other than the agreement) fails or may likely fail to pay access charge stipulated in (5), 1.1.2.8 (Directory Assistance Function, Etc.), 1.1 (Access Charges), Table 1 in the Tables of Charges.
 (2) In the event that the contracting carrier fails or may likely fail to observe the following provisions in handling the
 - subscriber number information to be provided. a In the event that the contracting carrier is provided with subscriber number information, it shall modify its database
 - without delay. b The contracting carrier shall not wrongfully impair the rights or interests of any subscribers of the registering carriers.
 - c The contracting carrier shall use the number information registered in the Directory Information Database only for the
 - purposes of compiling lists in the telephone directory or of providing directory assistance service carried out by itself. d In the event that the subscriber number information is registered in our Directory Information Database only for the purpose of providing directory assistance service, the contracting carrier shall use said number information only for the purpose of providing directory assistance service.
 - e In addition, the contracting carrier shall observe the Personal Data Protection Guidelines, Etc.
- *4 Any carrier registering information may request the termination of the provision of its subscriber number information to a using carrier by submitting documentation proving that the carrier using the Directory Information Database is violating the Personal Data Protection Guidelines, Etc. However, in the event that said using carrier lodges a complaint or takes other action concerning the termination of the provision of number information, the carrier registering such information shall respond to such complaints on its own responsibility, unless such causes are attributable to our company.
- *5 In the event that a carrier registering information requests the termination of the provision of number information, we will notify the carrier using such information to that effect and shall stop providing number information on subscribers of the carrier registering such information, unless it is considered that the request has no foundation.

1 Application Procedures, Etc, for the Construction of Interconnection Circuits

With respect to application procedures for interconnection circuits, we will respond to other carriers on the basis of a semi-annual regular application cycle in July and January of every year.

Schedule for Application Procedures

Current Fiscal Year Next Fiscal Year **First Half-Year** Second Half-Year **First Half-Year** Second Half-Year August Circuit construction Completion October Submitting Application at the requested timing work information February Circuit construction Completion Construction process April Submitting negotiations*2 Application at the requested timing work information (August ~ October) Construction process negotiations *2 (February ~ April) Submitting Completion at the Circuit construction Applications information requested timina at any time work in advance Construction process negotiations*

Explanation

*1 Prior to making an application for construction, please submit information concerning the requested number of circuits, the actual and estimated traffic, the accommodation status of transmission equipment, etc.

*2 We will discuss the number of circuits and the implementation period for the circuit construction work.

Applications at any time will be accepted only under the following conditions as specified in the Articles of Agreement.

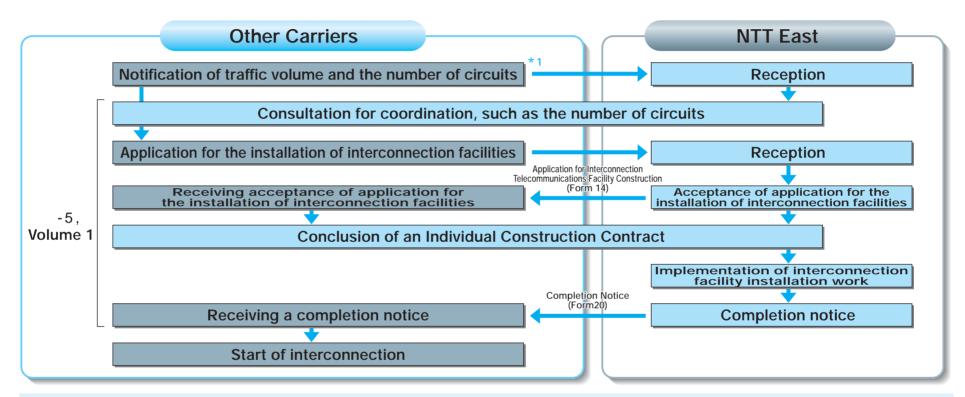
"À contracting carrier may make an application at any time only when there is fear that call loss (meaning the interruption of communications through the relevant transmission equipment, etc., or transmission lines due to the occurrence of calls that exceed the line capacity of the transmission equipment, etc., or transmission lines) may continuously occur due to rapid increases in the traffic of the contracting carrier."

With respect to the "function to use transmission equipment for local switch interconnection" and the "function to exclusively use local switch circuit-related parts" under the category of subscriber switching functions, the "function to exclusively use tandem switch circuit-related parts" under the category of tandem switching functions and the "function to use transmission equipment for tandem switch interconnection" under the category of interoffice transmission functions, the relevant expenses specified in the Articles of Agreement Concerning Interconnection are to be individually borne in accordance with the number of circuits applied by a contracting carrier.



- 2 Application Procedures for the Construction of Interconnection Circuits

NTT East will start interconnection in accordance with the following procedures in response to an application for construction (submitted under the semi-annual regular application cycle and/or submitted at any time) after receiving notification of the traffic volume and the number of circuits.



Explanation

*1 Materials to be submitted by other carriers

Actual and estimated traffic volume and the estimated number of circuits per POI and per switch

Actual traffic

First half-year: Actual traffic in May, June and July Second half-year: Actual traffic in November, December and January

At any time. Actual traffic in the past three months Estimated traffic volume and the estimated number of circuits

First half-year: As of the end of September and March in the next fiscal year

Second half-year: As of the end of March in the next fiscal year and as of the

end of September in the fiscal year following the next fiscal year At any time: As of the end of the fiscal half-year that includes the requested usage start month for interconnection facilities; as of the end of the next fiscal half-year; and as of the end of the fiscal half-year following the next fiscal half-year

Information concerning the accommodation status of transmission equipment, etc.

Other matters for which cooperation is requested by NTT East Number of circuits for which an application is made

Actual and estimated traffic volume and the estimated number of circuits per MA and per local exchange number



Facility Introduction Plan Presentation Manual (Excerpts)



Outline of Facility Introduction Plan Presentation Manual

NTT East is promoting various measures aimed at offering a wide variety of services, improving the efficiency of network operations and cost reductions. In view of the potential impact that these measures may have on other carriers, it is necessary to notify other carriers of these plans at an early stage. Accordingly, the *NTT Facility Introduction Plan Presentation Manual* was published in November 1998 through consultation with other carriers that have established interconnection with NTT East facilities regarding the appropriate methods to present facility introduction plans accompanying our network restructuring, etc., for the purposes of facilitating a smooth local-switch interconnection with other carriers and promoting efficient facility construction among all telecommunications carriers.

This section introduces excerpts from this manual covering the basic concepts and the information presented, etc.

· Basic Concepts ······	27
Presenting Information	28
• Outline of Information Presented ······	29
Presentation Schedule	30
Information Necessary in Formulating Facility Construction Plans	31
Information Necessary for Routing	32
Plan Modification and Notification Procedures	33



Basic Concepts

Basic Concepts

Information concerning NTT East's facility introduction plans will be provided on a voluntary basis for the purpose of facilitating the efficient development of facilities by telecommunications carriers. As the basic concepts behind providing this information relate to the potential impact that the introduction of facilities accompanying network restructuring may have on other carriers in terms of existing networks, business plans and other factors, the scope of the target information to be presented focuses on facility introduction plans accompanying changes involving the point of interface (POI) between other carriers and NTT East. It is our belief that these concepts concerning the presentation of such information will be reciprocated in case other carriers carry out any renovations, etc., of their network facilities.

Please note that any information presented may be subject to change in response to environmental factors both inside and outside our company. In case of any changes on our side, we will provide notifications as quickly as possible and flexibly respond to plan modifications by other carriers accompanying such changes.

Carriers and Areas Subject to Information Presentation

Carriers Subject to Information Presentation

- Carriers that have already established interconnection at switches (Note 1)
- Carriers planning to establish interconnection at switches (Note 2)
- Areas Subject to Information Presentation

Coverage areas are areas subject to interconnection on a "prefectural unit"^(Note 3) basis. In the event information for other areas is necessary as a result of the expansion of areas subject to interconnection, information that is deemed necessary at each step in the interconnection consultation process will be presented successively in the same way as carriers planning to establish interconnection at local switches.

Notes 1. Interconnection at switches means (1) local switch interconnection, (2) tandem switch interconnection and (3) signaling tandem switch interconnection. 2. Information that is deemed necessary at each step in the interconnection consultation process will be presented successively.

3. In some regions, subject areas are to be classified in accordance with our branch area classification.

Presenting Information

Confidentiality Obligations

Because information provided to other carriers constitutes part of our business management information, the information provided shall be kept secret and shall not be used for other than the intended purposes.

Cost Bearing for Plan Changes

Unlike the situation in which carriers requesting interconnection submit individual applications requesting the construction of our network facilities, this presentation of information is implemented on a voluntary basis with the aim of improving efficiency in facility construction by other carriers.

In the event any changes in our plans for which we have presented information require changes in the construction applications of other carriers, NTT East will meet the requirements of such changes in principle. With respect to any changes in the plans of other carriers that are not attributable to changes in our plans, we will make every attempt to respond positively by discussing each case individually. However, we must ask the interconnecting carrier to bear the necessary expenses for emergency measures, etc.

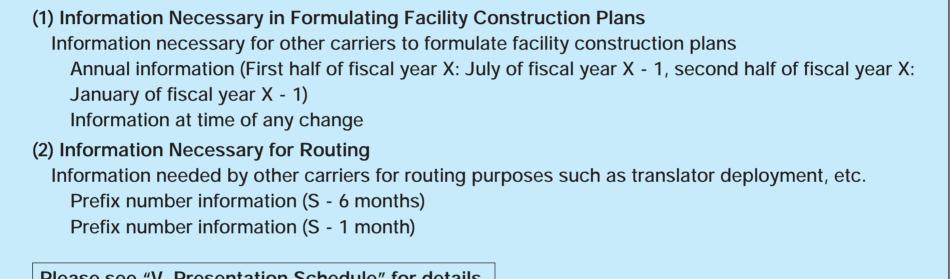
With respect to construction expenses incurred by other carriers for plan changes due to changes in our plan within S^{*} - 6 months, we will discuss the handling of such expenses based on the provisions of Article 88 (Exemptions) of the Articles of Agreement.

* "S" indicates service start timing.

Outline of Information Presented

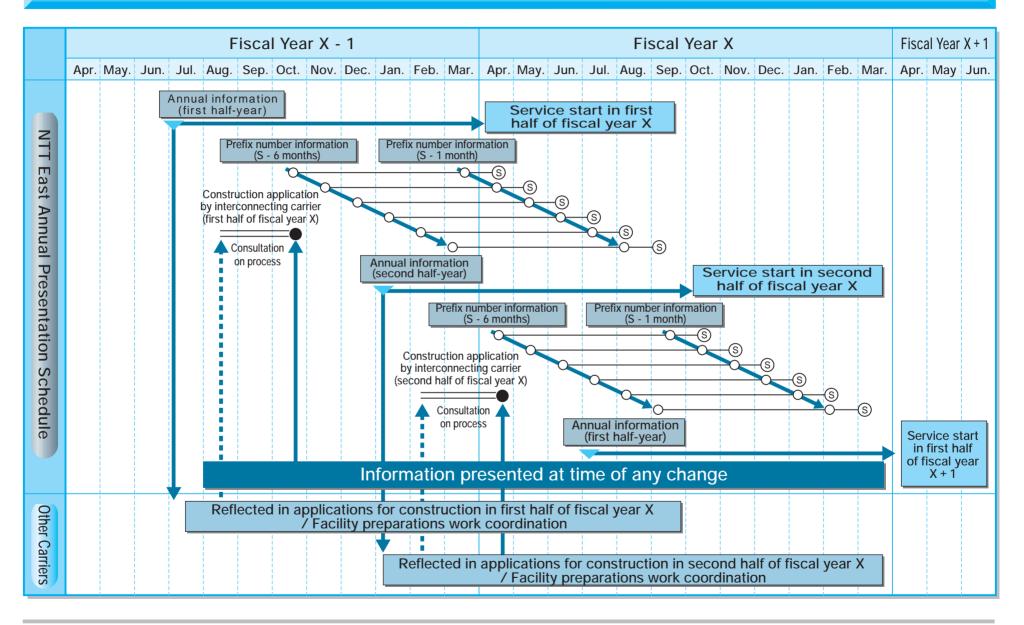
Information concerning the Facility Introduction Plan Accompanying Changes of the Point of Interface (POI) Between Other Carriers and NTT East (Note) that will be provided by NTT East consists of Information Necessary in Formulating Facility Construction Plans and Information Necessary for Routing.

(Note) A change of the NTT East point of interface means that the unit subject to interconnection is changed.



Please see "V. Presentation Schedule" for details.

Presentation Schedule



Information Necessary in Formulating Facility Construction Plans (Annual Information and Information at Time of Any Change)

We present the information (annual information) necessary for other carriers in formulating facility construction plans in July of fiscal year X - 1 and January of fiscal year X - 1.

Annual information (first half of fiscal year X) : Provided in July of fiscal year X - 1 Annual information (second half of fiscal year X) : Provided in January of fiscal year X - 1 Information at time of any change (the modified version of annual information)

Information Necessary in Formulating Facility Construction Plans (Example : Local-Switch Interconnection)

Basic Information	Facility information
(1) Branch name	(7) Number of planned terminals (Note 1)
(2) Prefecture name	(INS64, INS1500, subscriber telephone)
(3) MA name	(8) Planned service start month
(4) Building name	(9) New accommodation information (Note 2)
(5) Type of switch	(10) DPC number
(6) Unit name	(11) Prefix numbers accommodated (new/additional)
	(12) Prefix numbers accommodated (shifted prefix numbers)
	(13) Old unit information (Note 3)

Notes:

1. The number of planned terminals refers to the number for S+12 months.

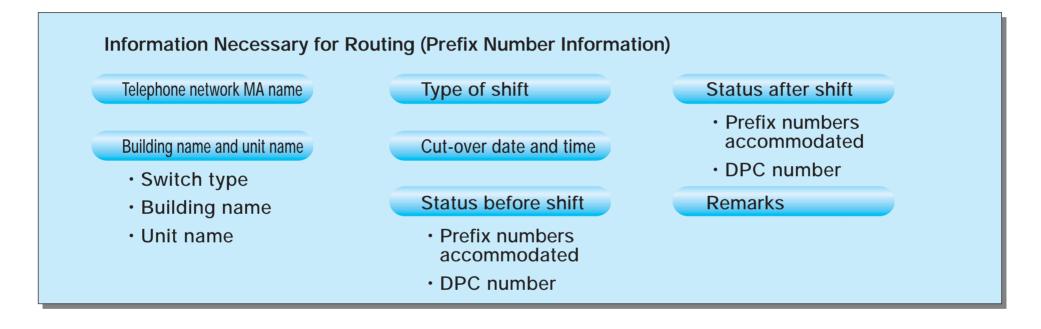
2. Information concerning switch to which the target switch is connected

3. Information concerning the old switch in which prefix numbers that were shifted to the target switch were accommodated

Information Necessary for Routing (Prefix Number Information)

We present the information (prefix number information) needed by other carriers for routing purposes such as the deployment of translators at S - 6 months and at S - 1 month.

In the prefix number information at S - 6 months, the "service start month (early/middle/late)" will be provided under the category of "cut-over date and time," and new numbering assignments will be provided under the category of "prefix numbers accommodated." In the prefix number information at S - 1 month, the "service start date and time" will be provided under the category of "cut-over date and time."





Plan Modification and Notification Procedures

As our plans to introduce facilities in GC units largely depend on demand trends, it is difficult to determine firm plans at an early stage. Accordingly, there may be cases in which modifications are required after the presentation of certain information. As such changes may have an impact on the facility plans of other carriers, we will provide notifications each time this occurs by means of "Information at Time of Any Change."



Notification Method In case of changes after the presentation of information, we will provide notifications by means of "Information at Time of Any Change" as quickly as possible each time a change is decided.

Target Information All annual information

Change to Routing Information (Prefix Number Information)

- Notification Method In case of changes after the presentation of information, we will announce such changes by including them in the next prefix number information presentation.
- Target Information Basically, changes concerning the numbering system and those with little impact upon facility construction plans.

