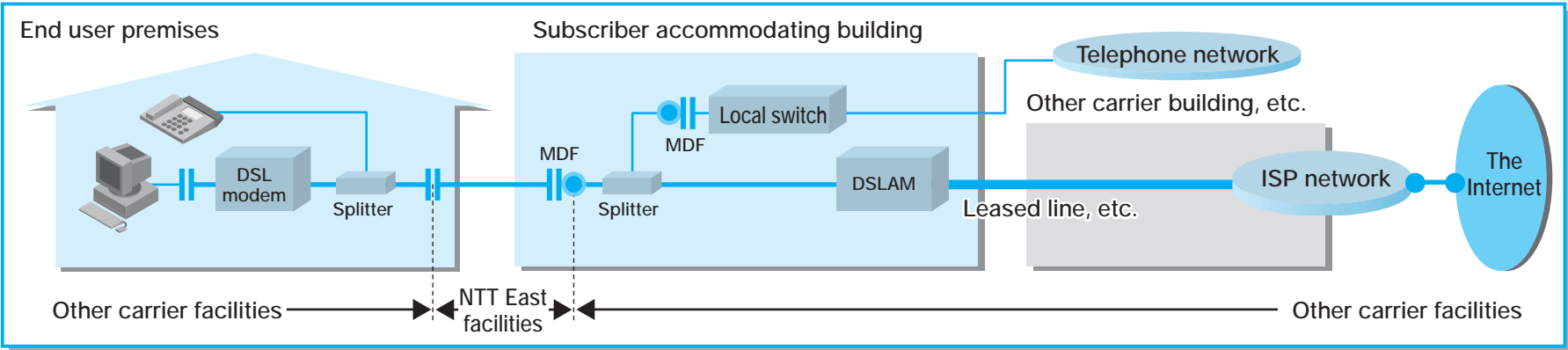


Chapter 3

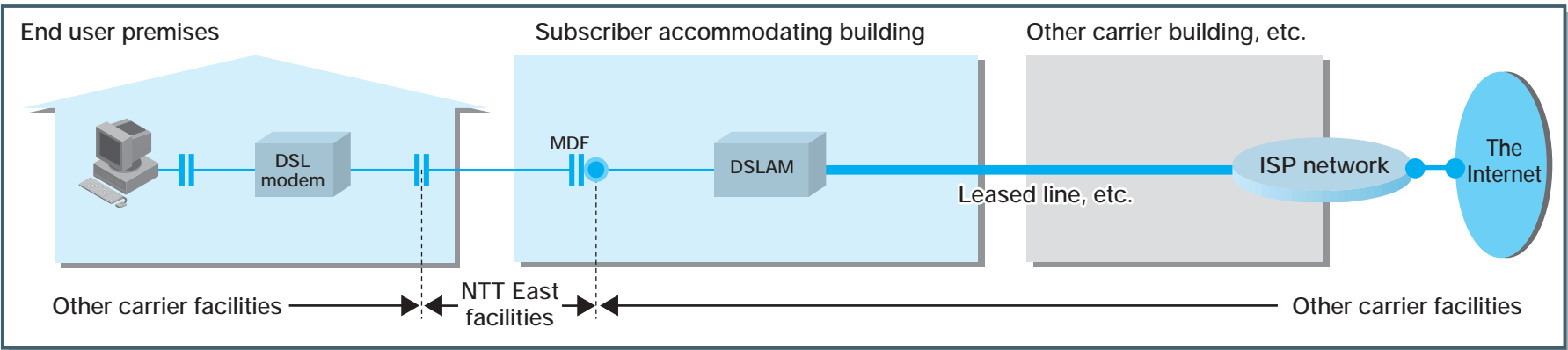
MDF Interconnection (Related to DSL Services)

Patterns of MDF Interconnection

In Case of Line Sharing



In Case of No Line Sharing



Pattern of MDF Interconnection by Collocation

Installing such other carrier facilities as splitters, DSLAMs, routers, etc., in NTT East communications buildings to provide DSL services, etc., by means of MDF interconnection is referred to as collocation (see Page 60).

In case of collocating other carrier facilities, such carriers can either undertake the installation work and carry out maintenance by themselves or consign such work to NTT East.

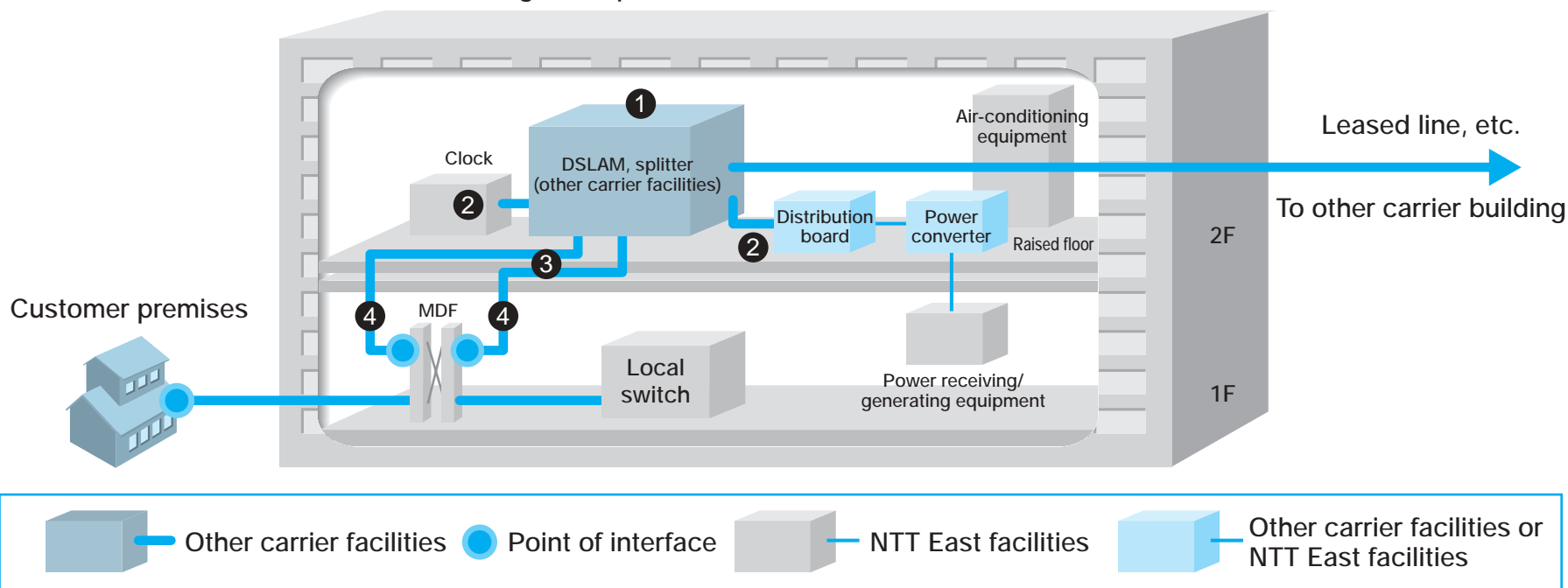
The following processes are involved in the self-undertaken installation work by other carriers or the work consigned to NTT East. (Including removal work)

- ① Work to install DSLAM, splitter, etc.
- ② Work to connect clock and electric power lines
- ③ Cable wiring
- ④ Work to connect communications lines

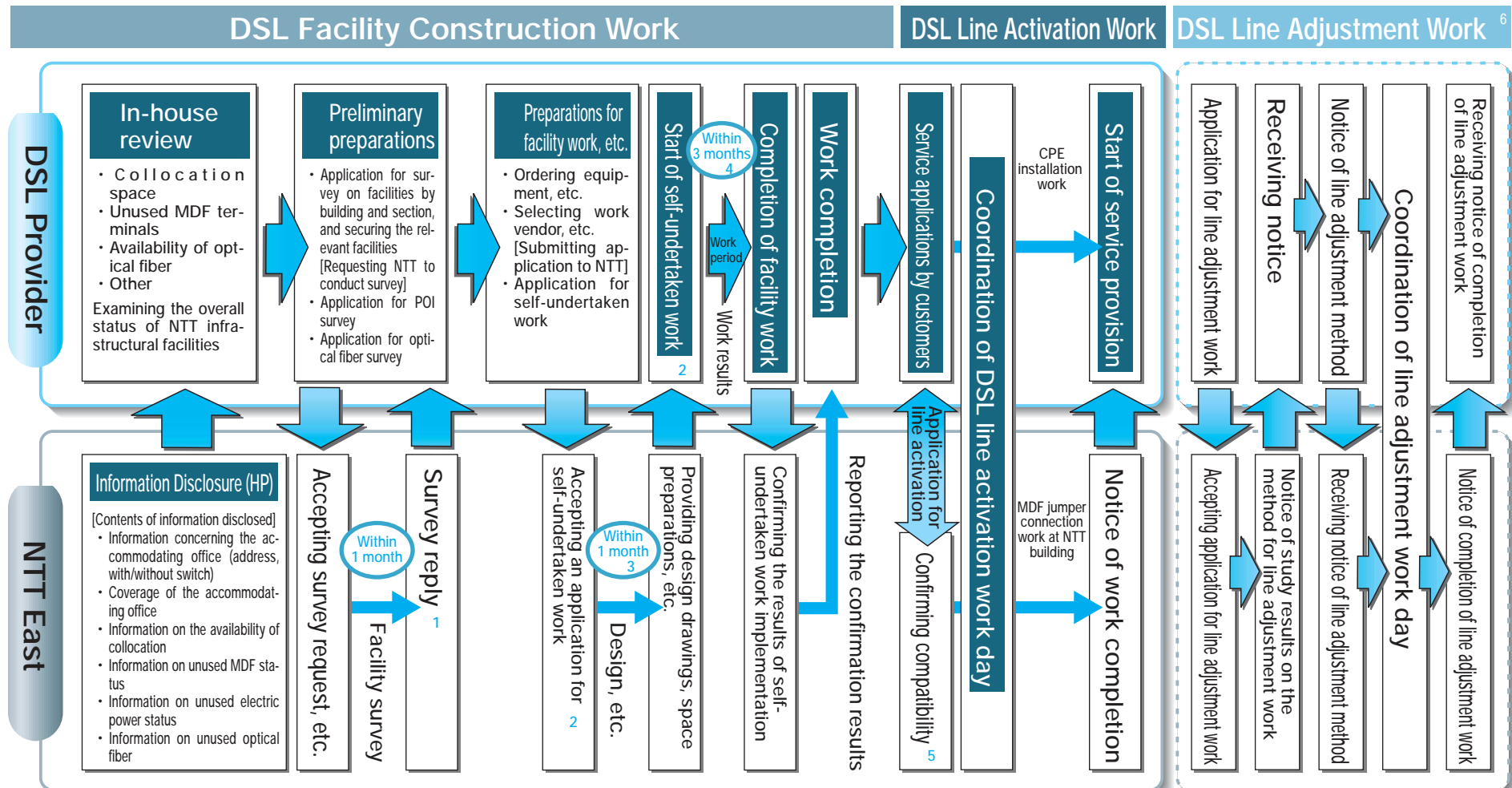
In addition to ① through ④, self-provided electric power and air-conditioning are also made possible.

Overview of Collocation (DSL Service)

NTT East communications building [example]



DSL Work Flow and Standard Timing

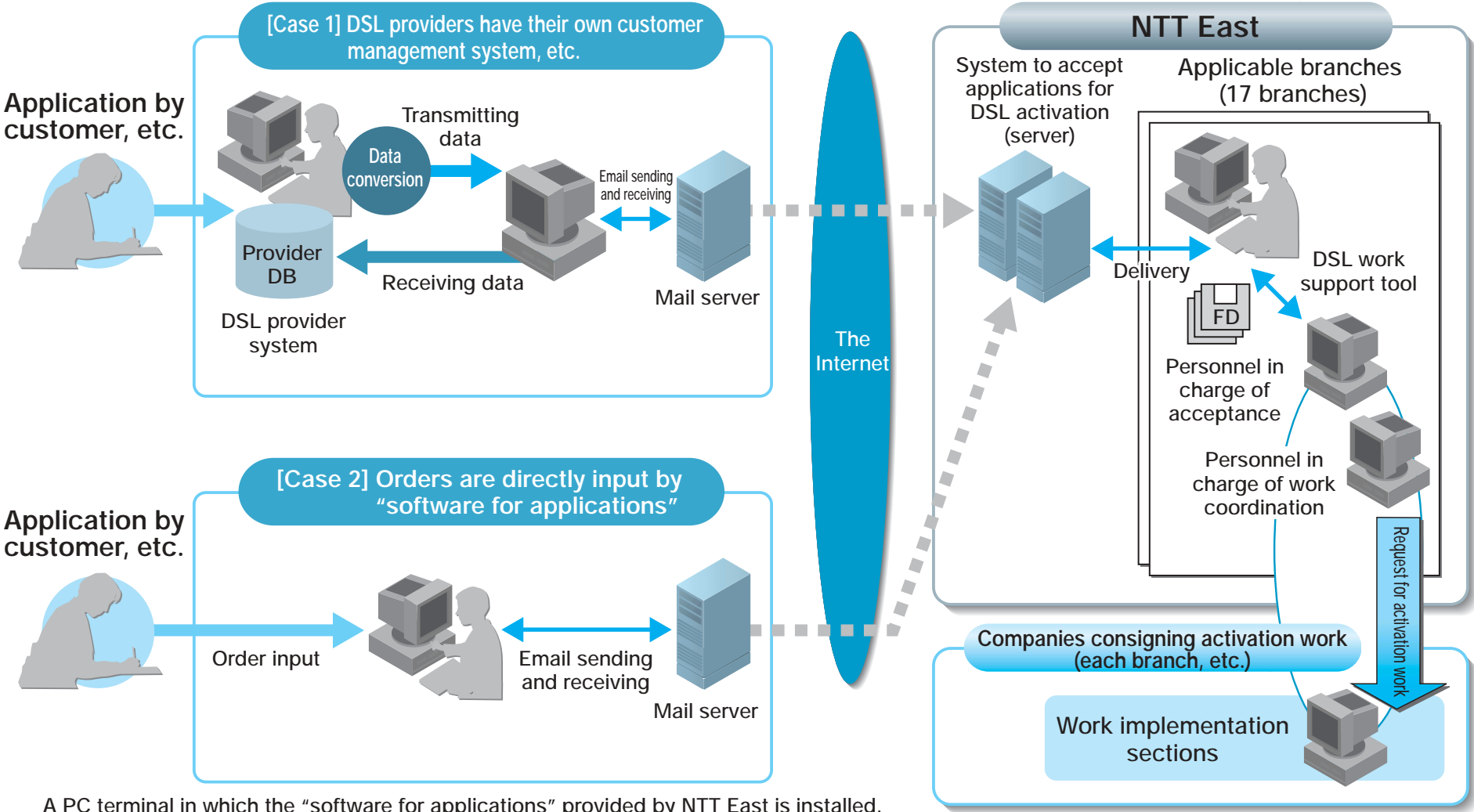


1 "POI Installation Application" and "Line Facility Interconnection Application" must be submitted within one month after survey reply.
 2 An application for self-undertaken work and the start of such work is required within six months after an application for securing facilities (1).
 3 In case preparations for NTT infrastructural facilities are necessary; for example: raised floor: 1.5 months.

4 In case the work period exceeds three months, NTT East may request discussions with other carriers. Moreover, the usage charge for the relevant space is required during the work period.
 5 Confirming the possibility of providing DSL service with respect to optical fiber, ISDN lines, etc.
 6 Communications at certain transmission speeds cannot be guaranteed through the implementation of line adjustment work. In case no unused wires are available in other subscriber lines, we may be unable to carry out the requested work to change the line wires used.

Acceptance of Applications for DSL Service Line Activation

In order to improve efficiency in accepting orders from DSL providers, information distribution such as line activation applications and orders between DSL providers and NTT East is realized by an online operations support system.



A PC terminal in which the "software for applications" provided by NTT East is installed.

V - 1 Rules Concerning Line Accommodation, Etc., for Each Transmission System Based on Spectrum Management Standards

In responding to the rapid spread of DSL services and diversification in transmission systems, NTT East has provided for the rules for the accommodation, etc., of DSL lines and specific operational rules in the Articles of Agreement Concerning Interconnection in accordance with the Spectrum Management for Metallic Subscriber Line Transmission Systems (Version 2) established by TTC ¹ (hereinafter referred to as "TTC Standards Version 2") in order to enable smooth service usage by DSL service users of contracting carriers.

👉 **Articles 22, 37-2, 37-3, 50-3, 52, 59, 61, 68 and Tables of Charges, Articles of Agreement Concerning Interconnection**

In the event of making an application for the installation or change ² of a DSL line, notifications concerning technical conditions for each transmission system should be provided to NTT East together with such application.

Transmission System	Usage Restrictions	Interconnection Charges	
		Access Charges	Expenses for Works and Procedures
Group 1	<ul style="list-style-type: none"> No restrictions are imposed in terms of accommodation and line length. 	Access charges applied to cases in which no restrictions are imposed in terms of accommodation are applied. Access charges applied to cases in which restrictions are imposed in terms of accommodation are applied.	(With respect to lines subject to post-installation measures, there are cases in which expenses for post-installation measures are required in case another carrier reports any problem.) • Expenses for surveys on the DSL accommodation status, expenses for surveys on DSL line length, and expenses for line adjustment work (Type 1) are applied as necessary.
Group 2	<ul style="list-style-type: none"> Restrictions are imposed in terms of accommodation or line length. In case of transmission systems on which restrictions are imposed in terms of accommodation, other lines are not installed in the same quad ³. In case of transmission systems on which restrictions are imposed in terms of line length, usage in excess of the line length prescribed for each transmission system is not possible. 		

Explanation

Note 1: Classifications used in TTC Standards Version 2 are used in the Collection of Technical Conditions.

Note 2: As the application of the protection criteria ⁴ specified in TTC Standards Version 2 does not have direct impact on interconnection conditions of transmission systems themselves, the Articles of Agreement Concerning Interconnection (other than technical conditions) take into account only whether or not there are restrictions in terms of accommodation or line length in classifying transmission systems.

Note 3: With respect to transmission systems for which spectral compatibility is not confirmed at TTC, interconnection will be established only after spectral compatibility is confirmed at TTC.

¹ TTC: Telecommunication Technology Committee

² Limited to cases in which specific contents of technical conditions of DSL lines are changed.

³ Two line pairs are twisted in the metallic cable.

⁴ The protection criteria are provided to indicate the maximum permissible interference from other transmission systems. If new transmission systems do not satisfy the values of the protection criteria through the calculation of spectral compatibility, restrictions will be imposed in terms of accommodation or line length.

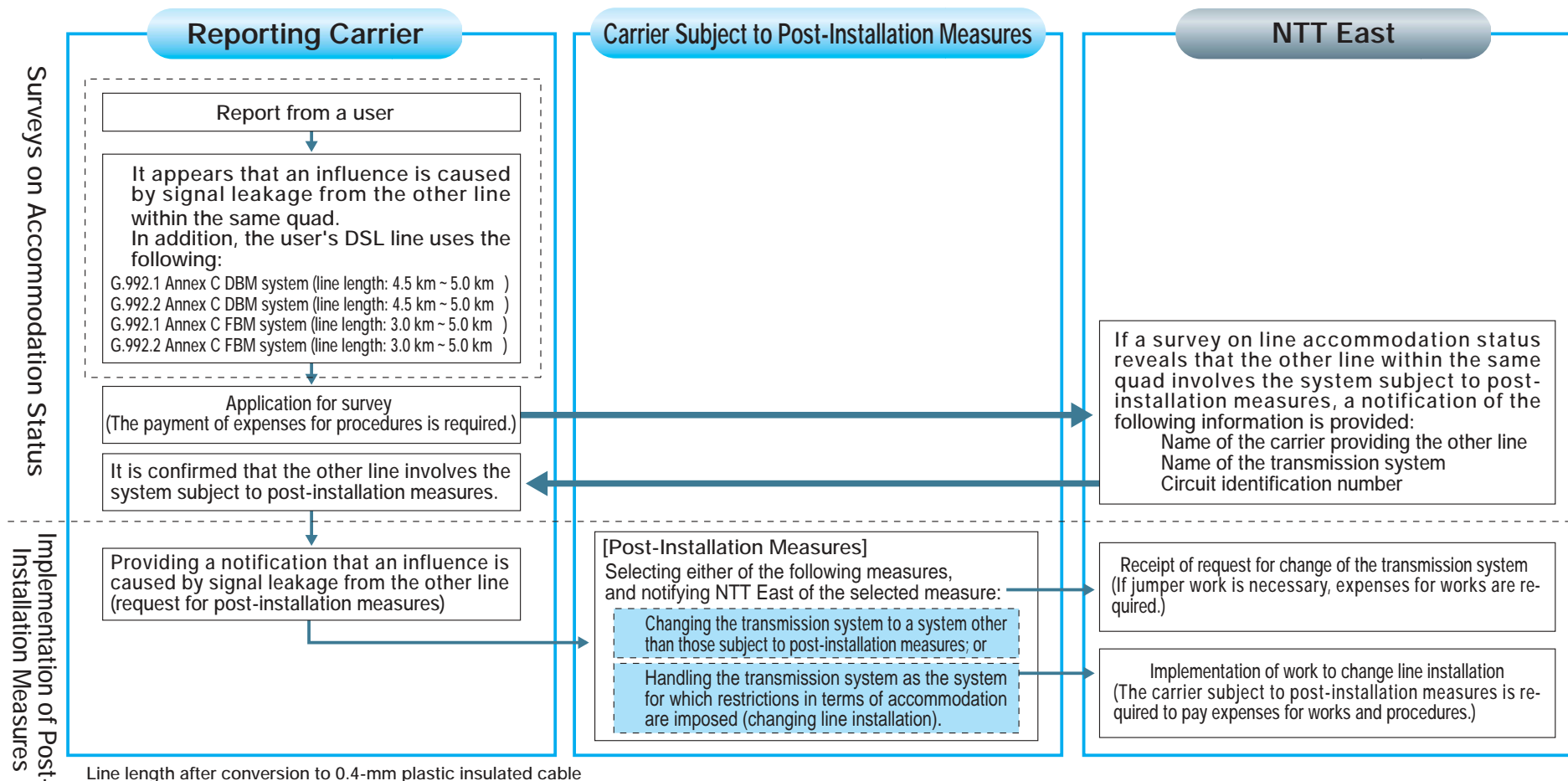
(Reference) Classification in TTC Standards Version 2

	Protected from other transmission systems	Not protected from other transmission systems	Classification in the Articles of Agreement Concerning Interconnection
<ul style="list-style-type: none"> No restrictions in terms of accommodation No restrictions in terms of line length 	Class A	Class B	Group 1
<ul style="list-style-type: none"> Restrictions imposed in terms of accommodation or line length 	Class A'	Class C	Group 2

- 2 Rules Concerning Line Accommodation, Etc., for Each Transmission System Based on Spectrum Management Standards (Post-Installation Measures)

A contracting carrier providing DSL services by using a transmission system for which TTC Standards Version 2 require post-installation measures (hereinafter referred as "systems subject to post-installation measures") is required to take post-installation measures (changing the relevant transmission system to a transmission system other than those subject to post-installation measures, or handling the relevant transmission system as the system on which restrictions are imposed in terms of accommodation) if a carrier providing the other line within the same quad (limited to lines using transmission systems that are approved as eligible for reporting under TTC Standards Version 2) reports any influence caused by signal leakage.

☞ Article 52 of the Articles of Agreement Concerning Interconnection



Information Disclosure Concerning DSL

Please confirm the newest information via homepage. (http://www.ntt-east.co.jp/info-st/info_dsl/menu.html)

Classification	Information Disclosure Item	Specific Contents	Implementation Method
Outline information necessary for business evolution	Location, etc., of an accommodating office	Addresses and specific names of administrative areas covered	<p>Information Web Station and Other carriers connected via Disclosure via HP.</p>
	Number of lines, etc., for each accommodating office	Number of analog telephone lines (full metallic, partial optical), number of ISDN lines	
	Availability of MDF, collocation site, and electric power facilities	Availability of MDF, collocation site, and electric power facilities (power receiving and generating facilities)	
	Names of accommodating offices in which metallic lines have been totally removed	Addresses and specific names of administrative areas covered	
	Information on metallic line removal	Disclosed four years ago; disclosed one year ago; areas where removal plans have been determined	
	Current status of optical fiber installations and future plans for optical fiber installations	Current status and future plans	
Detailed information necessary for facility construction	Details on unused MDFs	Number of available terminals	<p>Manual surveys for each case between Information Web Station and Other carriers.</p>
	Details on collocation site	Number of racks that can be installed	
	Facility environment	Available air-conditioning capacity, available power and UPS capacity, availability of raised floor at collocation site	
Detailed information necessary for each line	Line conditions (theoretical data)	Line length from accommodating office to user, type of insulation, line diameter, DC resistance, number of bridge taps, number of hand-twisted points, transmission loss	<p>Line information disclosure system and Information Web Station connected via Disclosure via HP to Other carriers.</p>
	Accommodation status (service situation) (theoretical data)	Accommodation of ISDN, DSL, etc., in the same quad, adjacent quad, every other quad or subunit	
Other information disclosed	Local exchange number for each accommodating office	List of local exchange numbers for each accommodating office (by prefectural unit)	<p>Information Web Station and Other carriers connected via Disclosure via HP.</p>
	Information on shift to optical fiber for telephone lines	Identification of "lines for which optical fiber is applied" and "other lines" for each telephone number	