

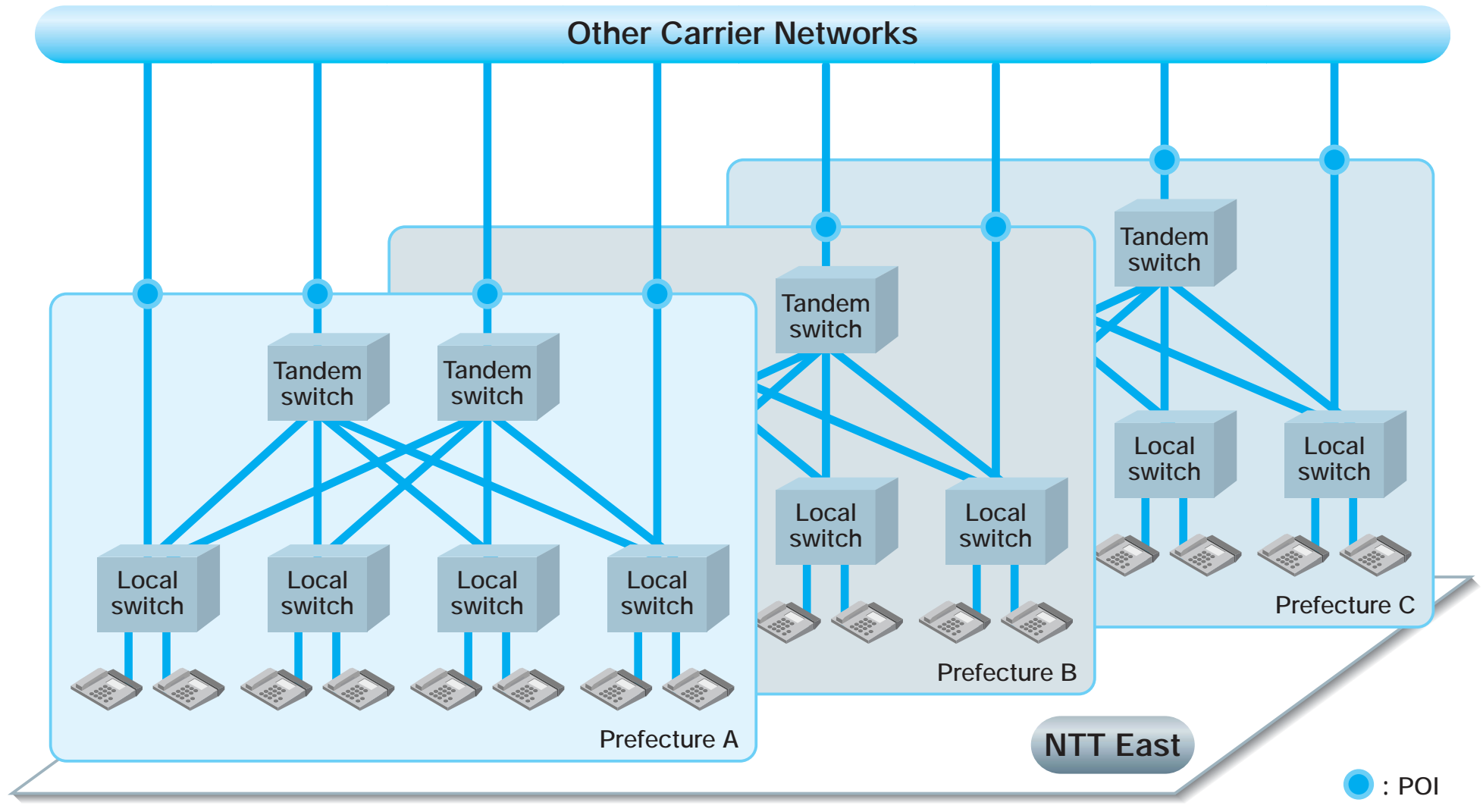
Chapter 1



Overview of Interconnection to NTT East Networks

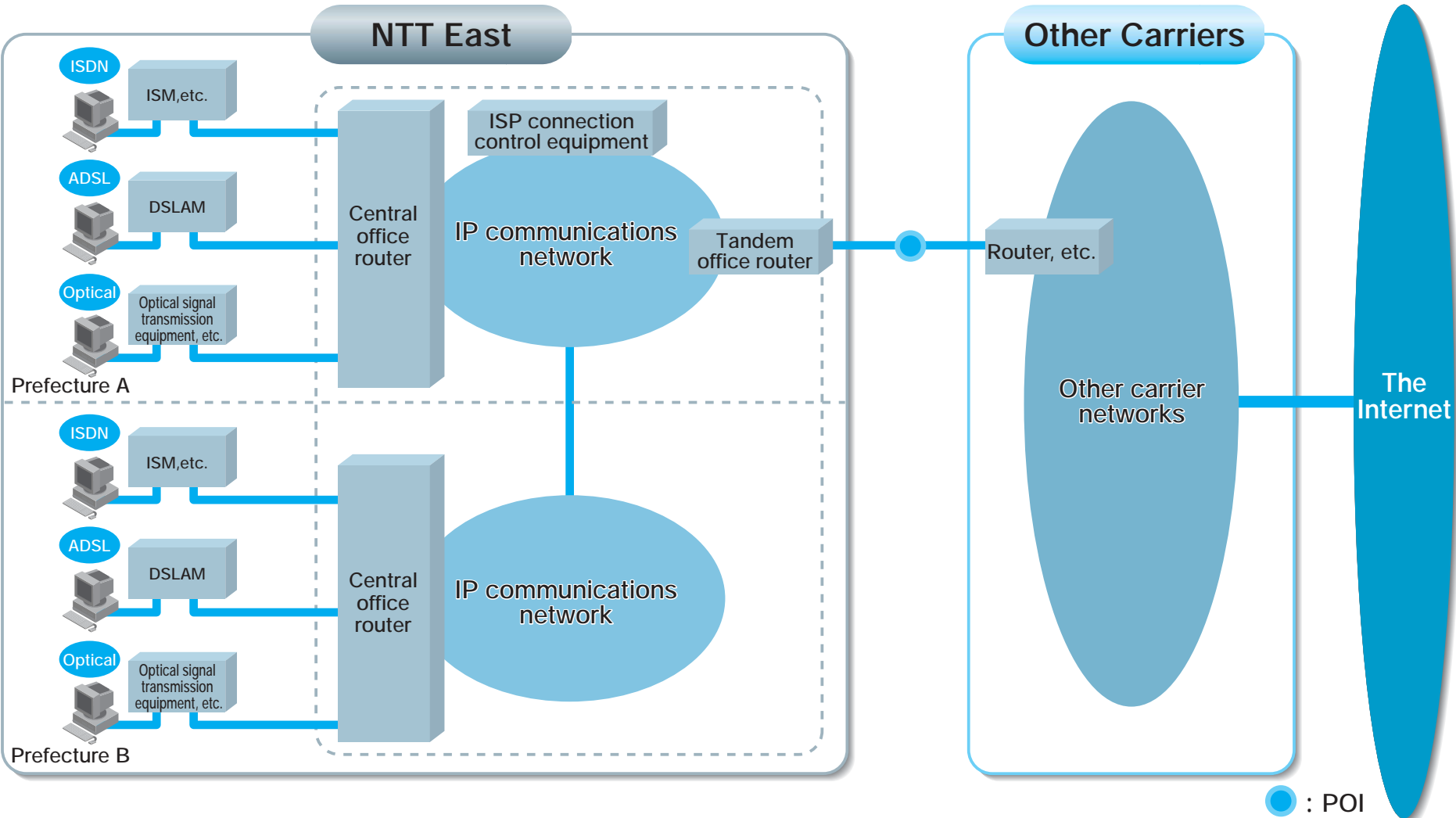
NTT East Network Architecture (Telephone Network)

NTT East provides intra-prefecture communications covering the East Japan area (Hokkaido, Tohoku, Kanto, Tokyo and Shinetsu). The following is a general overview of the NTT East telephone network architecture.



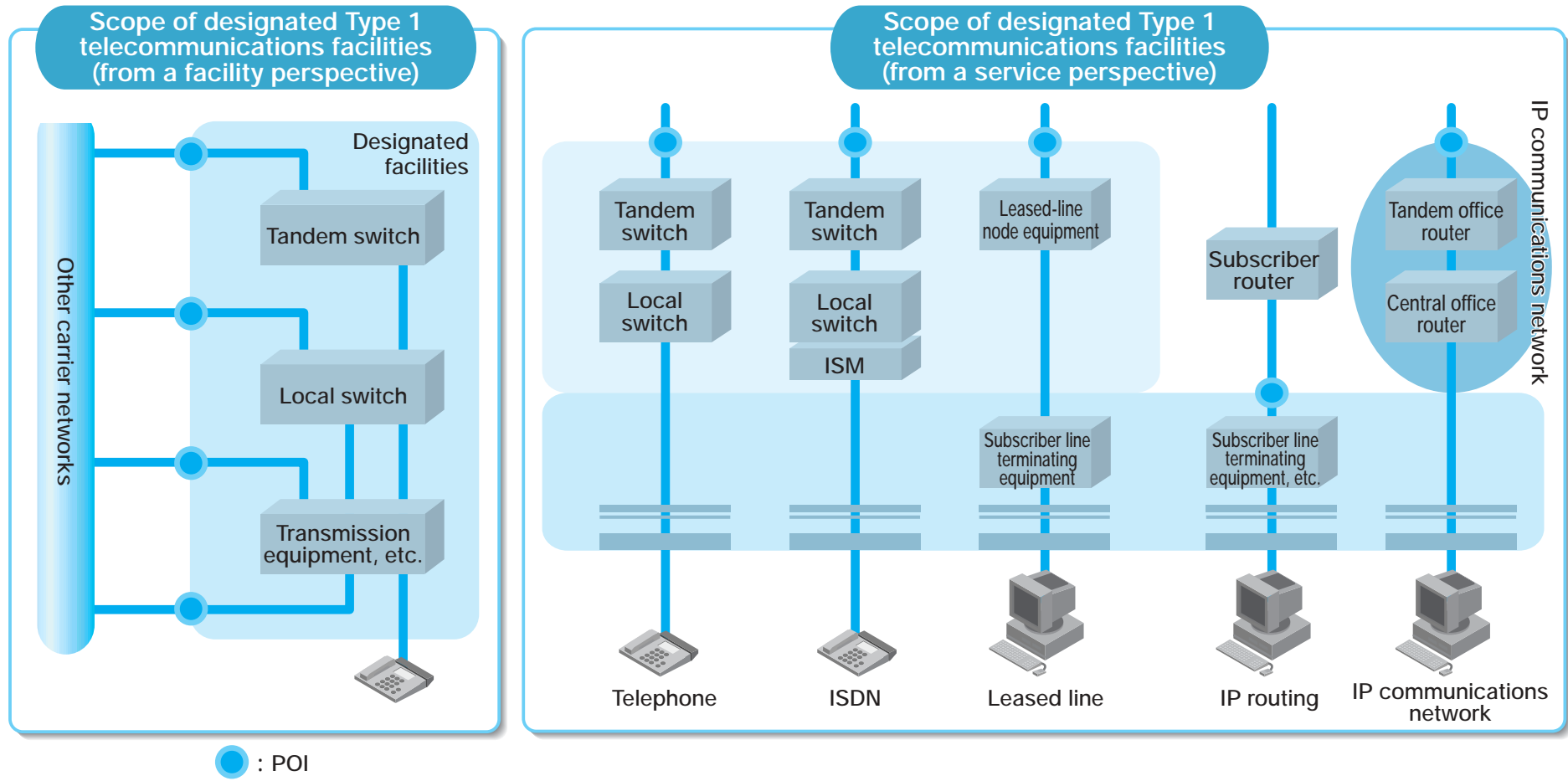
NTT East Network Architecture (IP Communications Network)

NTT East provides communications within the East Japan area (Hokkaido, Tohoku, Kanto, Tokyo and Shinetsu). The following is a general overview of the NTT East IP communications network architecture.



Designated Type 1 Telecommunications Facilities

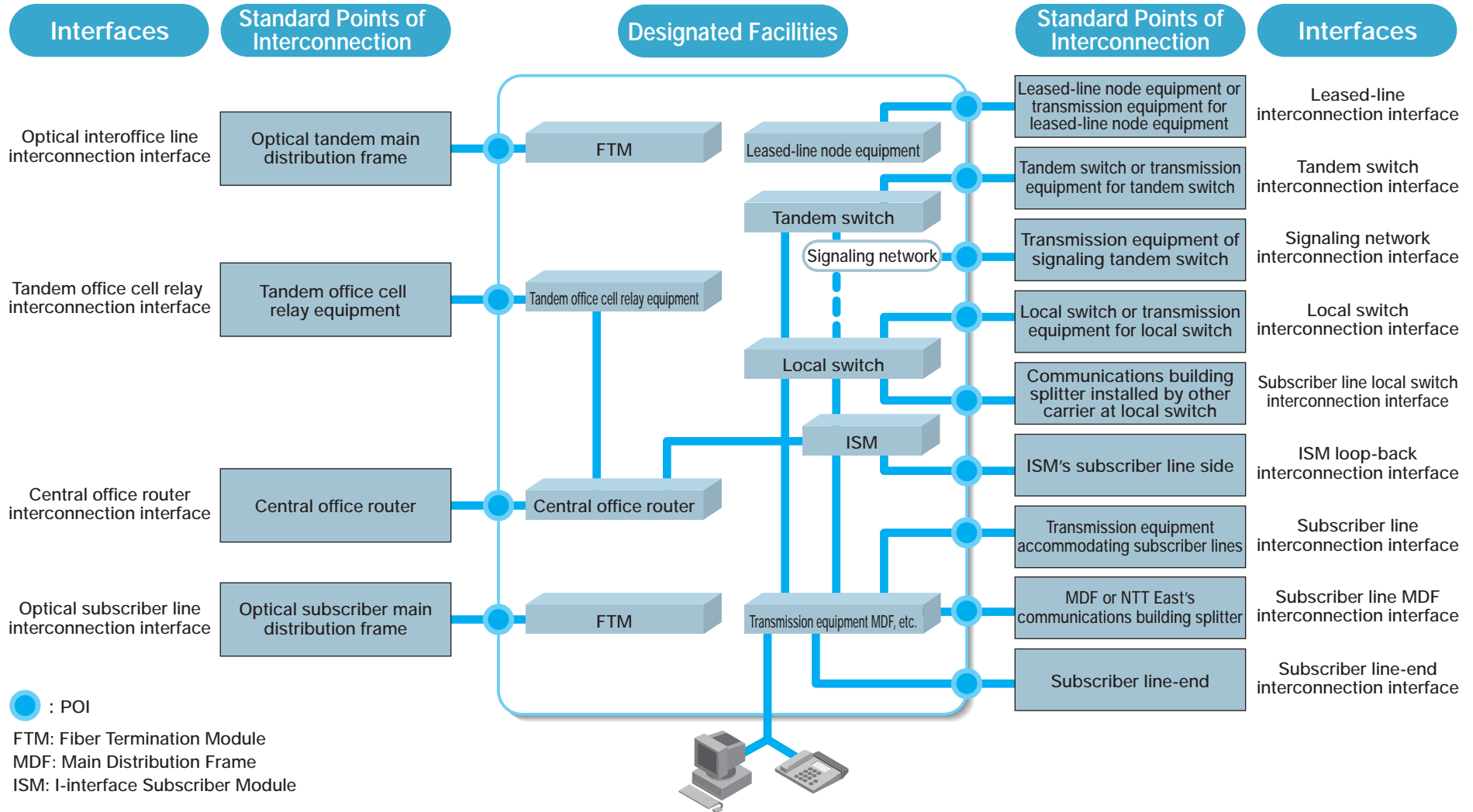
This guidebook provides an explanation of the NTT East facilities that have been designated* by the Minister of Public Management, Home Affairs, Posts and Telecommunications as essential facilities to provide service to customers ("designated Type 1 telecommunications facilities").



Explanation
 Designated by Notification No. 723 of the Ministry of Public Management, Home Affairs, Posts and Telecommunications (November 30, 2001)

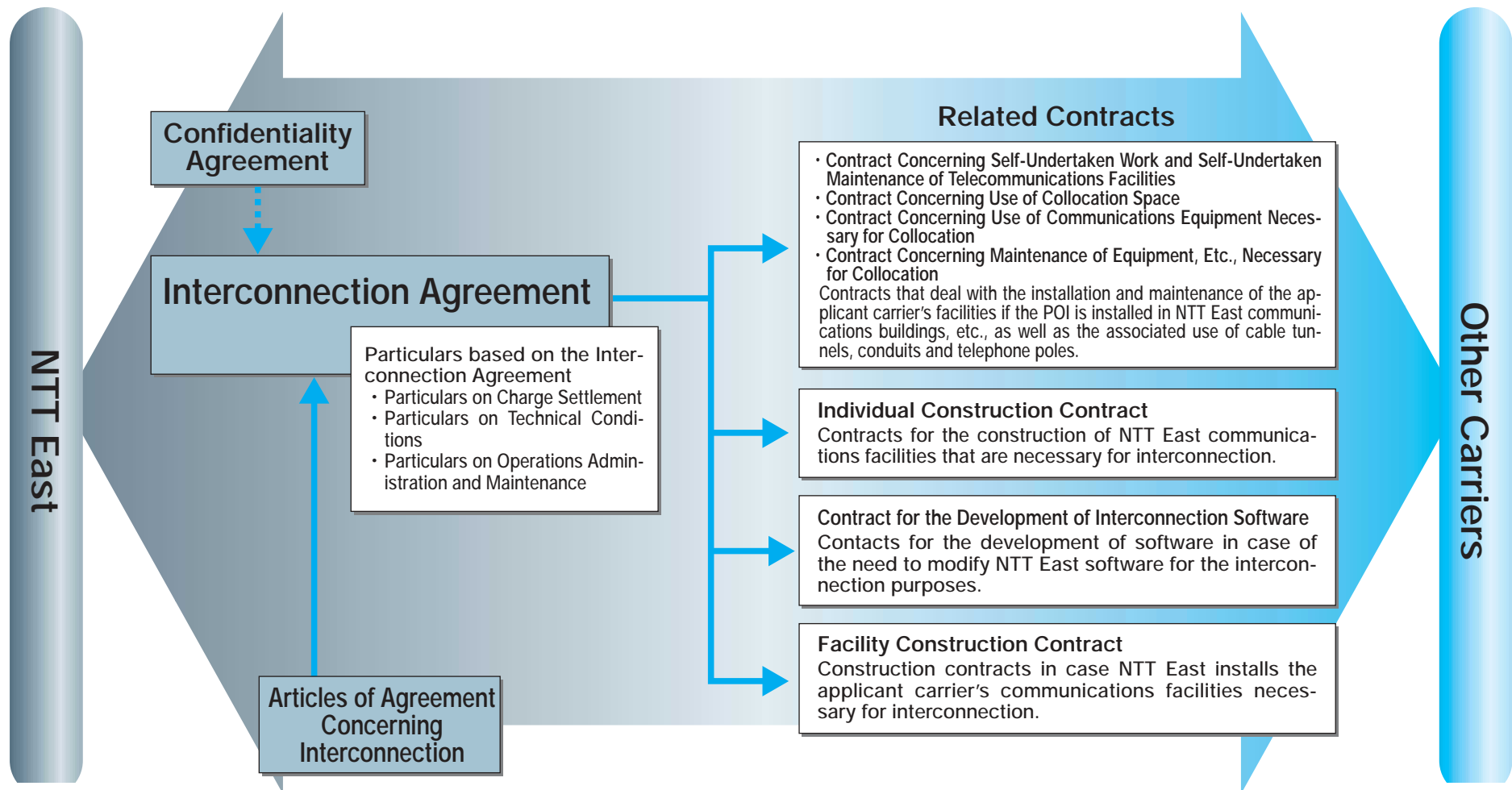
Standard Points of Interconnection and Technical Conditions

NTT East will establish interconnection at various points as specified in Article 5 of the Articles of Agreement Concerning Interconnection. The interface conditions applicable to each point of interconnection are described in the Collection of Technical Conditions included in the Articles of Agreement Concerning Interconnection to enable other carriers to verify technical compatibility in advance. [See Article 5 and the Collection of Technical Conditions of the Articles of Agreement Concerning Interconnection](#)



Interconnection Agreements and Contracts

As interconnection between carriers entails a number of agreements, various agreements and contracts are required in accordance with the interconnection format.



- 1 Major Interconnection Costs (1) (Contents and Billing Methods)

Major costs to be borne by other carriers in executing interconnection with NTT East networks are as follows.

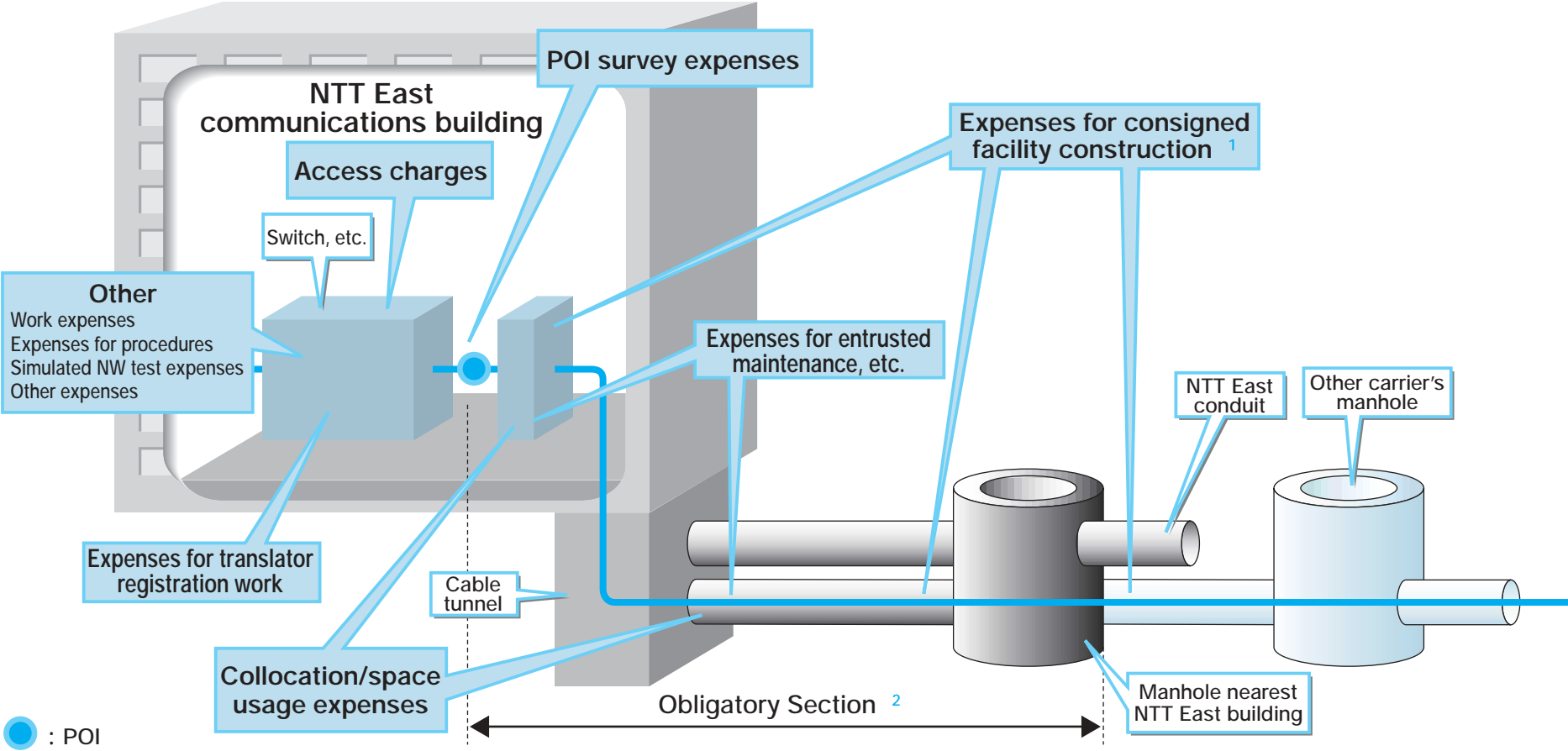
[See Tables of Charges](#)

Item	Contents	Billing Method
Access charges (1.1, Table 1 in the Tables of Charges, the Articles of Agreement Concerning Interconnection) <ul style="list-style-type: none"> • Interconnection call charges • Communications circuits for PHS public cell stations • Interconnection leased lines • Optical fiber lines • DSL lines • Other 	<ul style="list-style-type: none"> • Access charges for basic network interconnection functions (e.g., local switching functions) 	<ul style="list-style-type: none"> • Access charges are calculated in accordance with traffic volume, the number of circuits used, etc., on a usage-sensitive basis, and totaled and billed by calendar month.
Network modification charges (1.2, Table 1 in the Tables of Charges, the Articles of Agreement Concerning Interconnection) <ul style="list-style-type: none"> • Individual construction costs • Interconnection software development costs 	<ul style="list-style-type: none"> • Usage charges for individual and exclusive functions and facilities in case modifications to NTT East networks are made to realize such functions at the request of applicant carriers. 	<ul style="list-style-type: none"> • Costs (individual construction costs, interconnection software development costs, etc.) required for modifications are calculated on an annual basis, 1/12th of which is billed monthly. <small>* Network modification charges are also required at the time of usage cancellation and/or upgrades.</small>
Expenses for works (2.1, Table 2 in the Tables of Charges, the Articles of Agreement Concerning Interconnection) <ul style="list-style-type: none"> • Expenses for translator registration work • Expenses for PHS registration work • Work expenses for local switch interconnection line installation, etc. 	<ul style="list-style-type: none"> • Expenses for works in case of registering or changing subscriber line numbers, etc., at the request of applicant carriers. • Work expenses for an increase or decrease in the number of interconnection lines used for interconnection to applicant carrier facilities. 	<ul style="list-style-type: none"> • Billed per occurrence (numbers, magnetic media, work, line, etc.)
Expenses for procedures (2.2, Table 2 in the Tables of Charges, the Articles of Agreement Concerning Interconnection) <ul style="list-style-type: none"> • POI survey expenses • Charge collection handling expenses • Expenses for line condition surveys • Expenses for physical attendance • Other 	<ul style="list-style-type: none"> • Expenses for interconnection-related procedures undertaken at the request of applicant carriers. 	<ul style="list-style-type: none"> • Billed per occurrence (number of cases, etc.); charge collection handling expenses are billed monthly.
Expenses under Facility Construction Contract (Table 2-2 in the Tables of Charges, the Articles of Agreement Concerning Interconnection)	<ul style="list-style-type: none"> • Expenses in case NTT East is entrusted to construct the facilities of applicant carriers. 	<ul style="list-style-type: none"> • Billed per occurrence (work).
Expenses under Entrusted Maintenance Contract or Collocation and Space Usage Contract (Table 3 in the Tables of Charges, the Articles of Agreement Concerning Interconnection)	<ul style="list-style-type: none"> • Expenses for collocating applicant carrier's facilities in NTT East communications buildings, and/or expenses for space required to install facilities. 	<ul style="list-style-type: none"> • Calculated on a monthly or annual basis; monthly expenses or 1/12th of annual expenses are billed each month.

Required costs vary depending on the pattern of interconnection, etc.

- 2 Major Interconnection Costs (2) (Facilities Covered)

Major costs incurred for establishing POIs in NTT East communications buildings (including cable tunnels and manholes) and the relationship between such costs and the facilities covered are shown below.



Explanation

- 1 Incurred in case NTT East constructs the facilities of applicant carriers at the request of applicant carriers.
- 2 The section to be provided through POI surveys

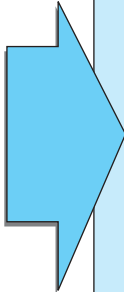
- 3 Obligation to Pay Interconnection Costs (Access Charges)

The provisions of the Articles of Agreement for Leased Line Service will be applied mutatis mutandis to the minimum usage period for access charges as specified in Paragraph 2, Article 64 (Obligation to Pay Flat-Rate Access Charges) of the Articles of Agreement Concerning Interconnection.

☞ See Article 64 of the Articles of Agreement Concerning Interconnection

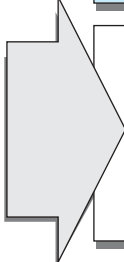
Functions for which the minimum usage period is applied ¹

- Exclusive-use interoffice transmission functions
- Optical/electric signal conversion functions
- Optical signal multiplexing and demultiplexing functions
- Data transmission functions
- Subscriber line transmission functions (Items (2), c and (8))
- Subscriber line transmission functions (subscriber optical fiber) (Item (6))
- Optical interoffice transmission functions (interoffice optical fiber)
- Optical intra-office transmission functions (intra-office optical fiber)



The minimum usage period for high-speed digital transmission service as stipulated in the provisions of the Articles of Agreement for Leased Line Service is applied mutatis mutandis (one year)

- Interconnection leased lines
 - Subscriber line transmission functions (Items "a" and "b," (2) and (3))
 - Exclusive transmission functions
- Inter-terminal transmission functions, etc.



The minimum usage period stipulated for respective leased line services is applied mutatis mutandis (one year).

Explanation

¹ The minimum usage period as stipulated in the Articles of Agreement for Leased Line Service is applied mutatis mutandis. The phrase "the cancellation of a leased line service contract" in the Articles of Agreement for Leased Line Service shall read "the cancellation of a leased line service contract or the suspension of interconnection for the interconnection leased line," and the provisions related to the lines for which charges are set by other carriers are excluded.

(Reference) Calculating Interconnection Charges for Designated Type 1 Telecommunications Facilities

When NTT East uses the actual cost method for calculating interconnection charges (access charges and network modification charges) for Type 1 telecommunications facilities that are designated by the Minister of Public Management, Home Affairs, Posts and Telecommunications as essential facilities (facilities with few alternatives) in providing services to customers, expenses for the designated Type 1 telecommunications facilities only are used as the costs to calculate interconnection charges in conformity with the Telecommunications Business Law and related government and ministerial ordinances, and specific charges are stipulated in the Articles of Agreement Concerning Interconnection.

If the telecommunications services to be offered are new and substantial increases in demand are expected in the future, the calculation period of the costs may be within the five-year period in accordance with the applicable ministerial ordinances.

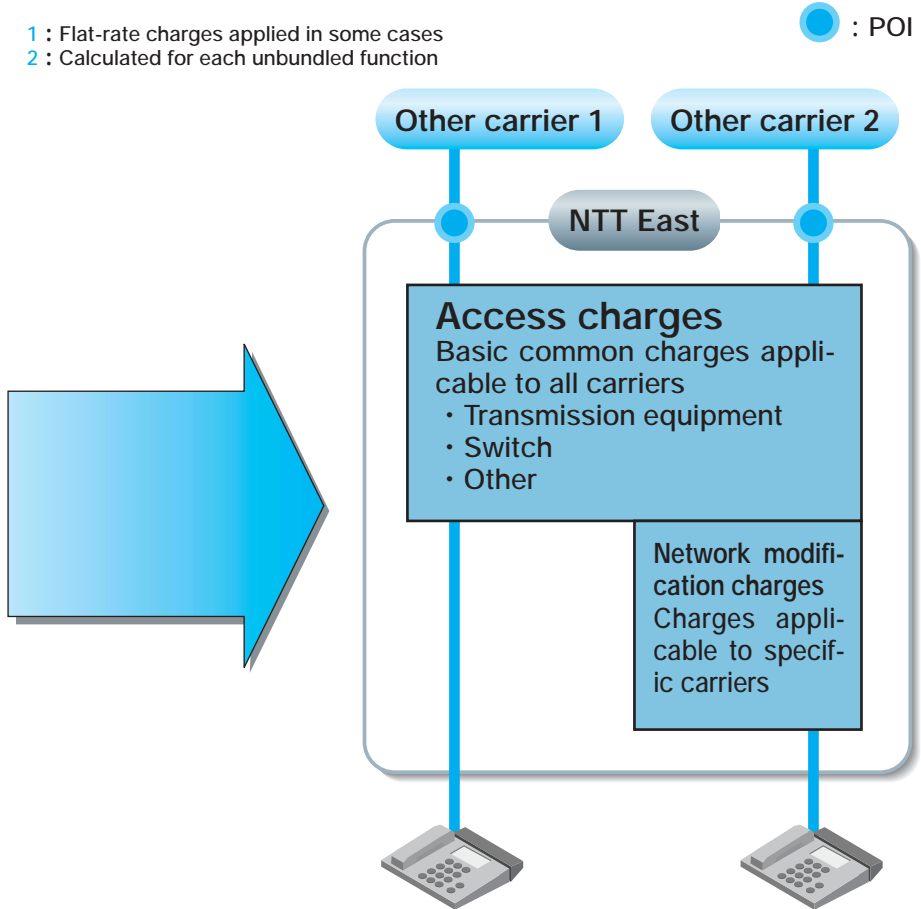
Of the access charges, costs for telephone and ISDN services are calculated in conformity with the Telecommunications Business Law and the applicable government and ministerial ordinances by using the expenses calculated on the assumption of newly re-built networks using the most efficient facilities and technologies now available at the lowest costs as costs by means of the long-run incremental cost (LRIC) method, and specific charges are stipulated in the Articles of Agreement Concerning Interconnection.

<Concept of actual cost method>

Interconnection charges
 Access charges = Set-up charges per connection + Charges per second ¹
 (Costs for interconnection charges are applied on a usage-sensitive basis.)
 Network modification charges = Annual charges (billed monthly)
 (Costs for facilities and/or functions that are individually and exclusively used are applied.)

NTT East costs	Excluding costs not related to interconnection	
	Costs of interconnection charges ² (Expenses only for designated Type 1 telecommunications facilities)	Administrative and operation costs for designated Type 1 telecommunications facilities Sales costs (interconnection-related only) Operation costs Facility maintenance costs Common management costs R&D costs (infrastructure-related only) Fixed asset retirement costs Depreciation costs Taxes and public dues Profit-based taxes
		Capital costs Borrowed capital costs Equity capital costs

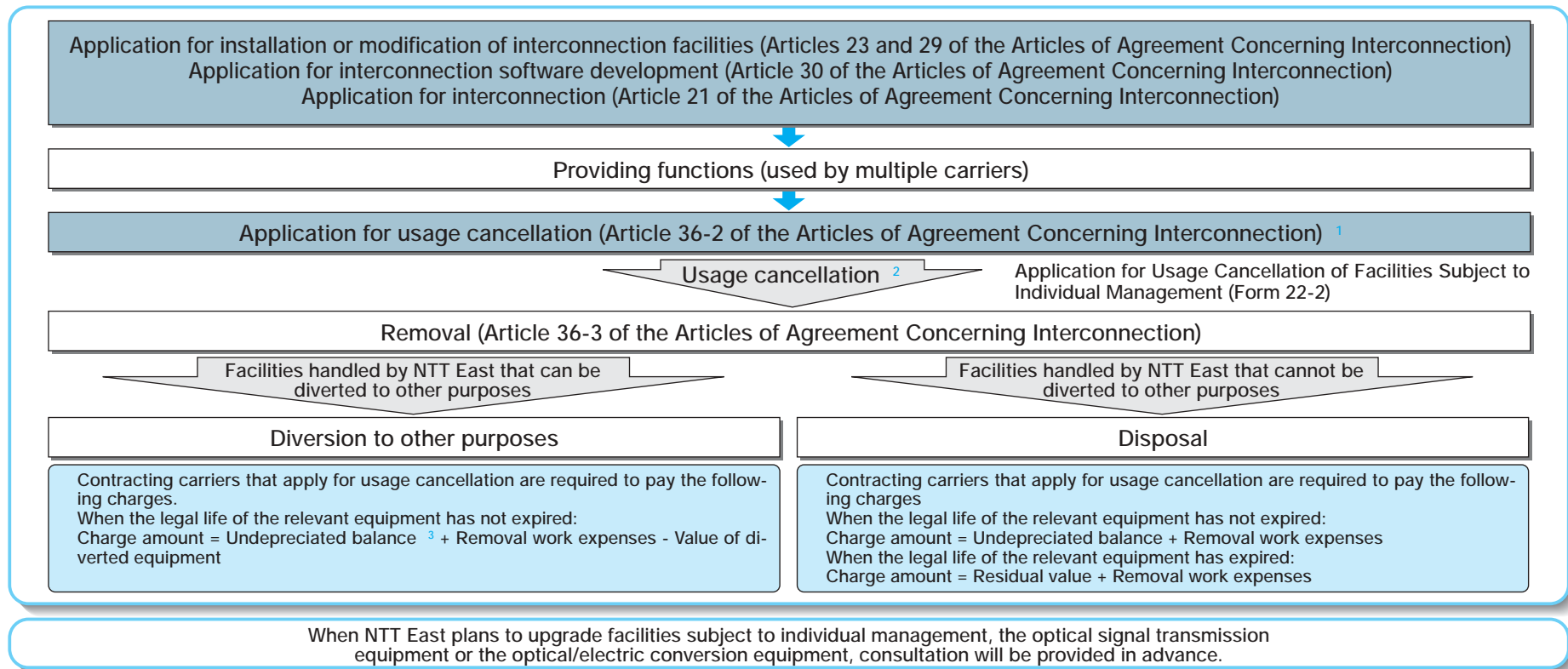
- 1 : Flat-rate charges applied in some cases
- 2 : Calculated for each unbundled function



- 4 Obligation to Pay Interconnection Costs (Network Modification Charges)

With respect to the provisions relating to the procedures and expenses for canceling the usage of NTT East's telecommunications facilities or software, the following procedures are applied for canceling the usage of facilities subject to individual management.

☞ See Articles 36, 36-2, 36-3 and 66 and Tables of Charges, the Articles of Agreement Concerning Interconnection



Explanation

- 1 Limited to cases in which all contracting carriers simultaneously have submitted applications for usage cancellation if multiple contracting carriers are using the relevant functions.
- 2 In case of requesting upgrades, an application for new telecommunications facilities or software is required in addition to an application for usage cancellation. After upgrades, moreover, the payment of network modifications charges for the new telecommunications facilities or software is required.
- 3 Undepreciated balance = (Fixed asset acquisition value - Residual value) × Ratio of remaining legal life + Residual value

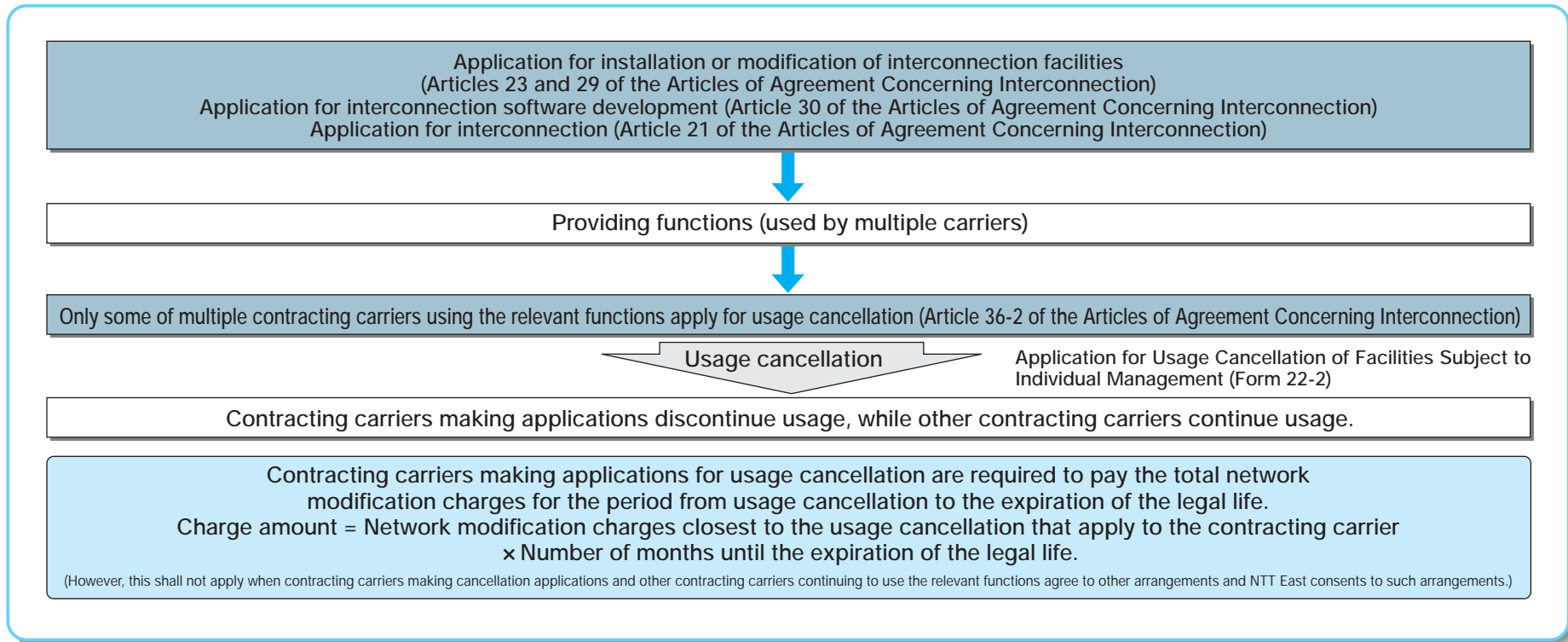
Reference

Facilities subject to individual management: Meaning telecommunications facilities or software relating to the functions subject to network modification charges.
Residual value: Meaning the fixed asset net value after the expiration of the legal life.
Undepreciated balance: Meaning the amount calculated by subtracting the amounts paid as network modification charges from the fixed asset acquisition value.
Removal work expenses: Actual expenses incurred
Value of diverted equipment: Meaning the appraised value of the equipment at the time of diversion (as calculated by the declining balance method)
The diversion feasibility of facilities subject to individual management can be viewed at: <http://www.ntt-east.co.jp/info-st/mutual/other/>

- 4 Obligation to Pay Interconnection Costs (Network Modification Charges)

With respect to facilities subject to individual management used by multiple contracting carriers, the following procedures are applied for usage cancellation by only some of contracting carriers.

☞ See Articles 36-2 and 66 and Tables of Charges, the Articles of Agreement Concerning Interconnection



Explanation

When requesting upgrades, an application for new telecommunications facilities or software is required in addition to the application for usage cancellation. After upgrades, moreover, the payment of network modification charges relating to new telecommunications facilities or software becomes necessary.

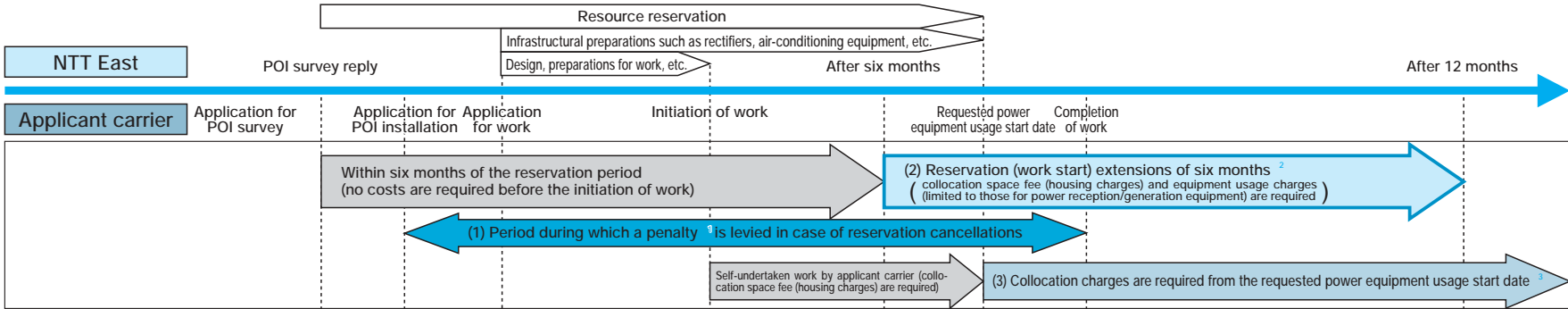
- 5 Interconnection Costs (Collocation Space, Etc., and Interoffice Optical Fiber)

Costs to be borne with respect to the reservation or the reservation cancellation of NTT East’s collocation space, etc., and interoffice optical fiber are as follows.

Articles 78-2 and 78-3

Collocation Space, Etc.

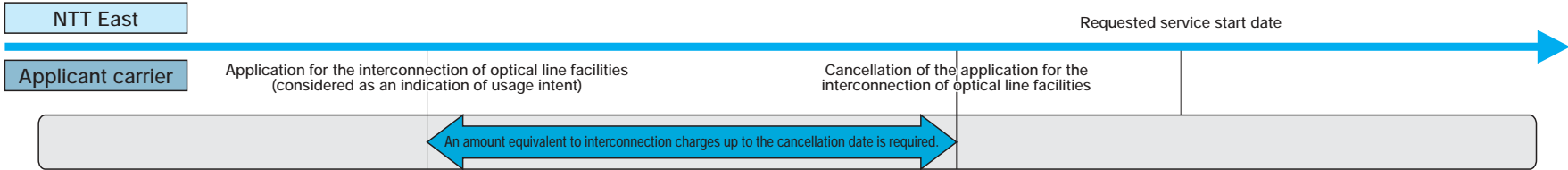
- If a POI installation application is cancelled during the period from the date of such application to the completion of the POI installation work, the payment of a penalty equivalent to the equipment usage charges (limited to charges for the power reception/generation equipment) for the period from the POI installation application to the reservation cancellation is required.
- Payment of the collocation space fee (housing charges) and the power reception/ generation equipment usage charges is required to extend the resource reservation period.



1 A penalty equivalent to the equipment usage charges (limited to those for power reception/generation equipment) for the period from the POI installation application to the reservation cancellation (the cancellation of the POI installation application) is required. However, the charges already paid under the procedures specified in (2) and (3) will be subtracted from this penalty.
 2 NTT East will not accept reservation extensions in case of special situations, such as reasons attributable to the applicant carrier.
 3 If the date on which NTT East makes the power equipment available comes after the power equipment usage start date requested by the applicant carrier, collocation charges will be required from the date on which the power equipment becomes available. Collocation charges are required from the planned work completion date in case of work that does not entail the usage of new power equipment. (However, if the work completion date comes before the planned work completion date, collocation charges are required from the work completion date.)

Interoffice Optical Fiber

If an interconnection application is cancelled during the period from the date of such application to the start of the interconnection, the payment of a penalty equivalent to the interconnection charges for the period from the interconnection application to the cancellation is required.



VI - 6 Handling Cases Where Credit Concerns Have Arisen with Contracting Carriers

To meet as many suitable interconnection requests as possible, the procedures to handle cases where credit concerns have arisen with contracting carriers are stipulated in the Articles of Agreement Concerning Interconnection.

➔ See Articles 22, 45, 48, 53-2, 60, 61-2, 67, 68, 73-2, 77-2, 85, 100 and 101, the Articles of Agreement Concerning Interconnection

Handling cases where an applicant carrier has failed or is likely to fail to pay any amount payable with respect to interconnection ¹... (1) ~ (5)

(1) Non-acceptance of an application for interconnection, etc. (Article 22)

It is stipulated that an application for interconnection shall not be accepted if an applicant for interconnection has failed or is likely to fail to make payment. ²

(2) Non-acceptance of a request for work or procedures, etc. (Article 100)

It is stipulated that NTT may decline to accept a request from a contracting carrier for work or procedures, etc. ²

(3) Consultation on making deposits, etc. (Article 77-2)

It is stipulated that NTT may request consultation with a contracting carrier in order to secure a guarantee on the payment of obligations such as by making deposits.

Handling cases where any reason resulting in the forfeiture of the grace period ¹ becomes applicable to a contracting carrier... (4) and (5)

(4) Acceleration of payment (Article 73-2)

When a contracting carrier declares insolvency with respect to all or part of obligations payable
 When a petition is submitted against a contracting carrier for bankruptcy pursuant to laws and ordinances
 In case of suspending payment on or dishonoring any bills or checks
 When a petition is submitted for compulsory procedures for liquidation of the assets pursuant to laws and ordinances
 When the whereabouts of a contracting carrier are unknown

When the registration of telecommunications business for a contracting carrier is revoked
 When a contracting carrier discontinues all telecommunications business operations
 If a state that is likely to cause significant hindrance to the continuation of business by a contracting carrier occurs, and when the contracting carrier is unlikely to pay its obligations payable with respect to interconnection

It is stipulated that if any of the reasons listed above becomes applicable, a contracting carrier shall forfeit any grace period with respect to charges and other obligations payable to NTT in relation to interconnection and shall immediately pay such charges and other obligations to NTT. ⁴

(5) Suspension or discontinuation of work or procedures, etc. (Article 61-2)

It is stipulated that NTT may suspend work or procedures, etc. (may discontinue if the situation is not corrected even after such suspension). ²

Suspension of Interconnection (Article 60)

If any of the following items becomes applicable, NTT may suspend interconnection.

If charges and other obligations of interconnection have not been paid after the due dates, interconnection is suspended up to payment of such charges or other obligations.

If Article 47 (Confidentiality Obligation), Article 51 (Responsibility for Maintenance) or other provisions of these Articles of Agreement are violated, interconnection is suspended up to correction of such violation.



Cancellation of Agreement (Article 45)

NTT may cancel the Agreement if any of the following items becomes applicable.

When a contracting carrier with whom interconnection was suspended has not yet eliminated the cause for such suspension.

When a contracting carrier falls under Article 60 (Suspension of Interconnection), and it is deemed that the cause for such suspension will particularly and substantially hinder the implementation of NTT's business activities. ³

Explanation

- Items 1) through 5) and 8) in (4) Acceleration of payment are included in cases where a contracting carrier has failed or is likely to fail to make payment.
- It is clearly stipulated that cases in which payment of obligations payable with respect to interconnection is guaranteed are excluded.
- NTT may cancel the Agreement without suspending interconnection before such cancellation.

- If 4), 6) or 7) is applicable, cases in which a contracting carrier guarantees that there is no fear of failing to pay any amount payable with respect to interconnection are excluded.

Other related provisions stipulated in the Articles of Agreement Concerning Interconnection include prior consultation for consent to the assignment of accounts receivable (Article 53-2), notification of necessary matters (Article 48), a notification method to a contracting carrier whose whereabouts are unknown (Article 60), expenses in case of Agreement cancellation, termination, etc. (Articles 85, 67 and 68) and reciprocal conditions (Article 101).