Interconnection System in Japan (Itemized discussion)

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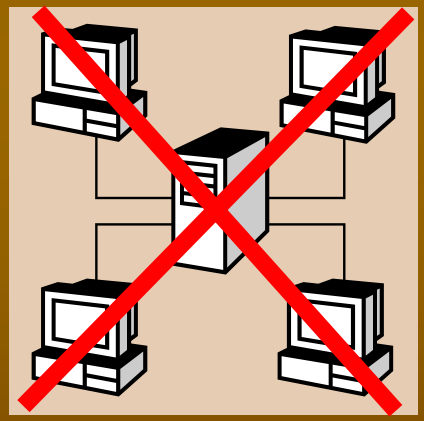
Methods of calculating access charges

Methods		Main objects
Long-Run Incremental Cost method (LRIC)		• Local switch • Tandem switch • Interoffice line between Local switch and Tandem switch • Signal transmission network • Access line to PHS base station
Actual cost method	Forward-looking cost method	• Subscriber line (optical fiber) • Regional IP network
	Historical cost method	• Subscriber line (copper) • Interoffice fiber • Exclusive line • Public phone
Carrier's rate		• ISDN subscriber line(INS1500) • Exclusive line

Long-Run Incremental Cost System (LRIC)

1 What is the LRIC?

System in which a calculation is made based on costs (forward-looking costs) when newly constructing the cheapest and most efficient facilities and technology that can be used based on the current number of subscribers.



Existing network

Cheapest

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Most efficient facilities and technology

Mechanism

Long-Run Incremental Cost System (LRIC)

2 Thinking on basic items

(1) Suppositions on technology and facilities

- Models presented according to the model adopt the most efficient facilities and technology used at the present time.
- Without being limited to the facilities and technology actually used in the designated telecommunications facilities, and within the range in which reliable costs can be grasped, investigate facilities and technologies that are currently adopted by several domestic and international influential carriers.

(2) Using objective data

- In basic terms, adopt public and objective data as much as possible such as investigations on international affairs, offices, corporate statistics investigations etc.
- Even in cases where investigation is required based on the results data of the companies, avoid as much as possible basing this on the data of particular companies or manufacturers but make a proposal based on multiple sources of data.
- Input values for models related to invested amount are decided based on the most recently obtained, most reliable resurveyed price data.

(3) Consistency with related ministerial orders

- The model maintains consistency with current regulations and policies in Japan.
- Connection charge prime costs for unbundled element units specified by the prime cost calculation regulations for the connection charges on the currently designated telecommunications facilities, can also be calculated by the model.

Long-Run Incremental Cost System (LRIC)

2 Thinking behind the basic items

(4) Consistency and independence of foreign models

- At the same time as maintaining as much as possible consistency with the models of foreign countries such as the U.K and the U.S, maintain independent thinking for Japan based on geographical conditions.

(5) Neutrality of calculation conditions

- The network envisioned by this model is not based on facility construction of specified companies but is created by efficiently combining devices of the specification in a logical and general way.
- In regard to the maintenance costs and shared costs calculated by the model, bear in mind the generally required conditions for managing and operating the above network.

(6) Neutrality from pricing

- When creating the model, the objective is costing (methods of grasping costs), in other words basically calculating the individual unbundled element unit costs and regional unit costs.
- We should not get into the debate concerning how to calculate the actual connection charges from calculated costs, in other woreds pricing （methods of calculating charges）.

Long-Run Incremental Cost System (LRIC)

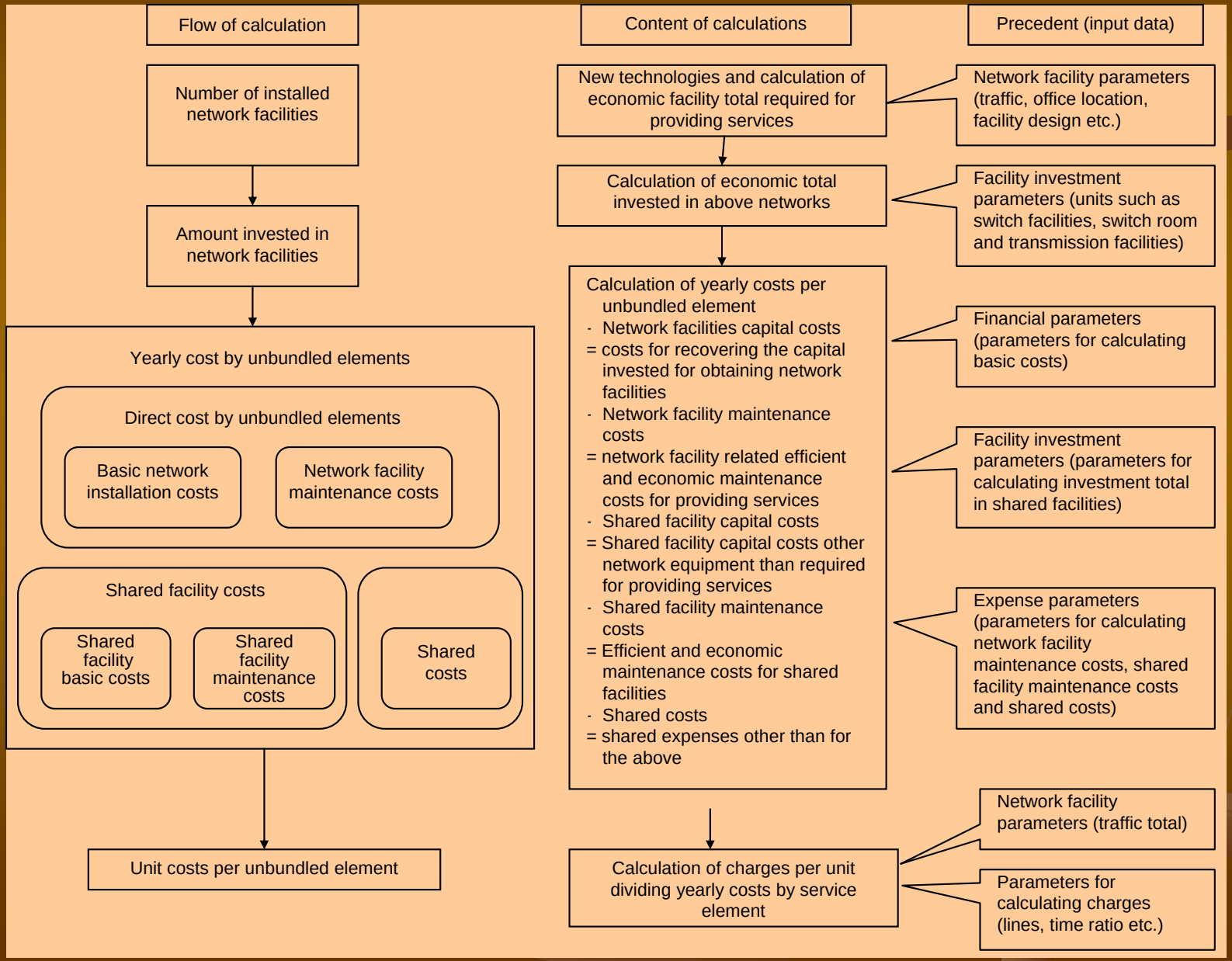
2 Thinking behind the basic items

(7) Maintaining transparency and public nature

- From the point of view of securing transparency, the grounds for technical suppositions in the model and for following the actual method of calculation, should be demonstrated in as an objective and clear way as possible in consideration of secrecy and business conditions of the company.

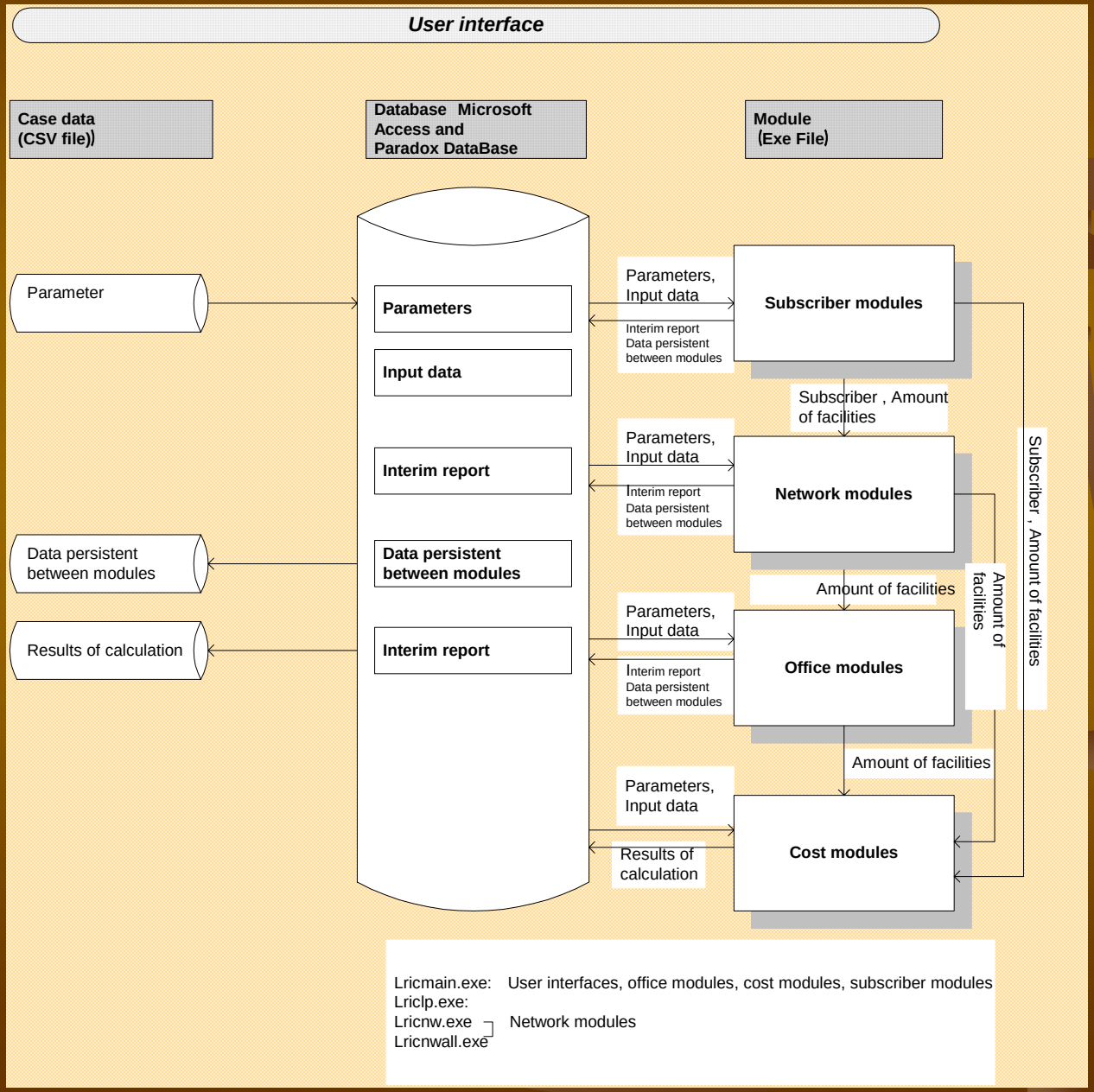
Long-Run Incremental Cost System (LRIC)

3 Method of calculating costs by each unbundled element in the model



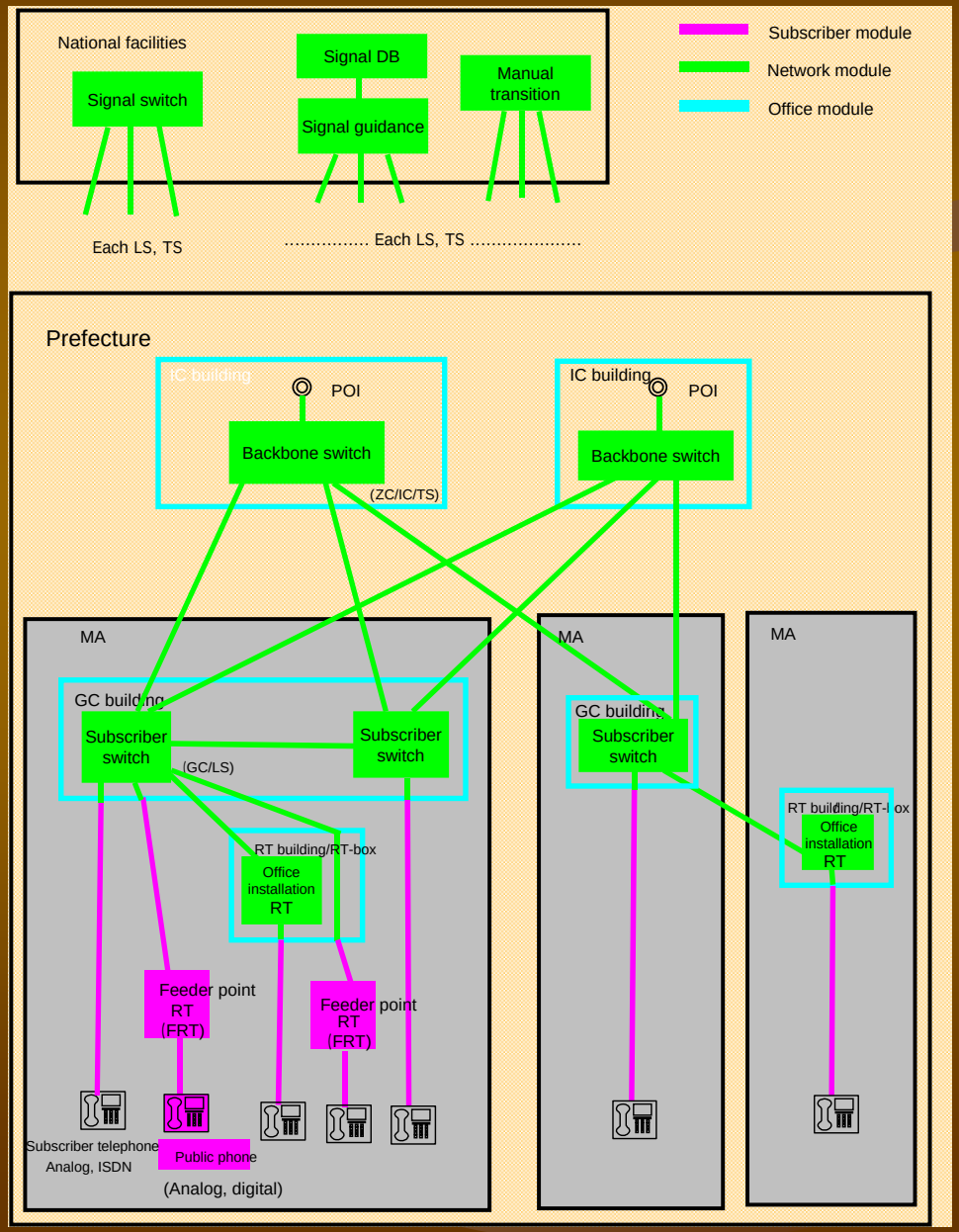
Long-Run Incremental Cost System (LRIC)

4 Structure of Model



Long-Run Incremental Cost System (LRIC)

5 Calculation range for each module



Actual cost system (1) (Results Prime Cost Method)

1 What is the actual prime cost system?

Method that calculates connection charges required for management and operation of regional networks based on accounting data.

Method of calculation

Connection charges = Prime costs (costs for switches, transmitters, transmission paths, appropriate remuneration etc.) / Demand (traffic、facilities etc.)

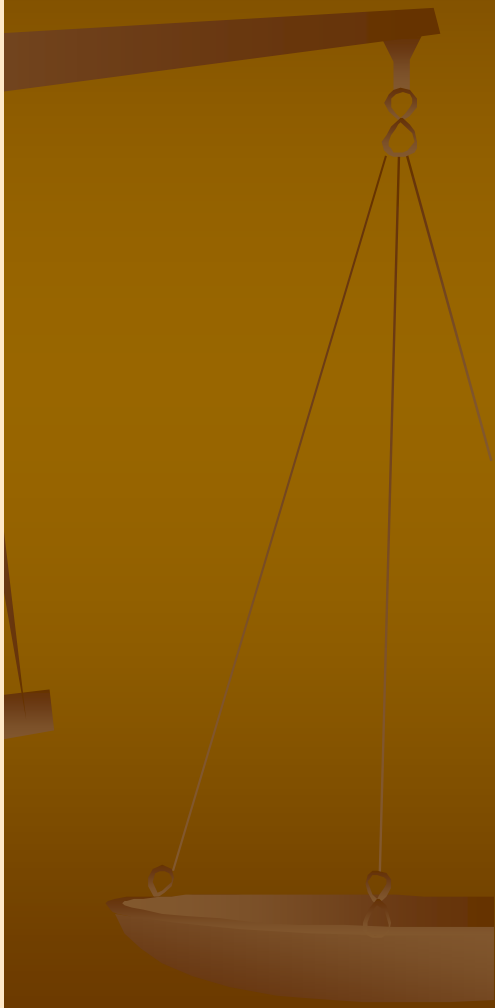
- Type 1 designated facilities management and operating costs (costs for switches, transmitters and transmission paths)
  - Depreciative costs
  - \+ Facility preservation costs, Fixed asset eliminated costs, Operating costs etc.
- \+ Capital costs of others
- \+ Own capital costs
- \+ Profit tax

Actual cost system (1) (Results Prime Cost Method)

2 Concrete example of results prime cost system ~Dry Copper~

Transition in dry copper connection charges

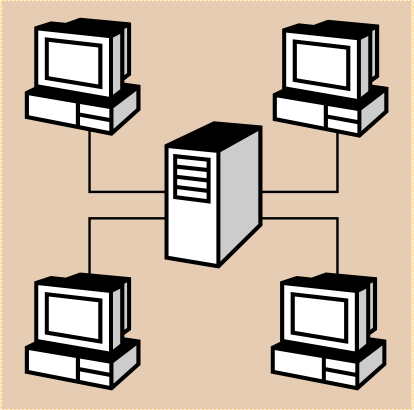
Approved date			NTT East	NTT West
Dec. 15, 2000			¥1,905	¥1,905
	Line management operational costs	1 line	¥157	¥157
		1 bill	¥128	¥128
Jan. 31, 2002			¥1,790	¥1,790
	Line management operational costs	1 line	¥143	¥143
		1 bill	¥126	¥126
Feb. 14, 2003			¥1,690	¥1,803
	Line management operational costs	1 line	¥139	¥147
		1 bill	¥125	¥125
Oct. 29, 2003			¥1,290	¥1,399
	Line management operational costs	1 line	¥139	¥147
		1 bill	¥125	¥125
Feb. 17, 2004			¥1,256	¥1,318
	Line management operational costs	1 line	¥129	¥135
		1 bill	¥130	¥134
Mar. 1, 2005			¥1,319	¥1,328
	Line management operational costs	1 line	¥118	¥112
		1 bill	¥91	¥83



Actual cost system (2) (future prime cost system)

1 What is the future prime cost system?

System that calculates connection charges based on forecast values for cost and demand and where new telecommunications services are being provided, and an increase in demand is foreseen, with a range restricted to 5 years.



New

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Large increase in demand

【Period of calculation】

In principle one year

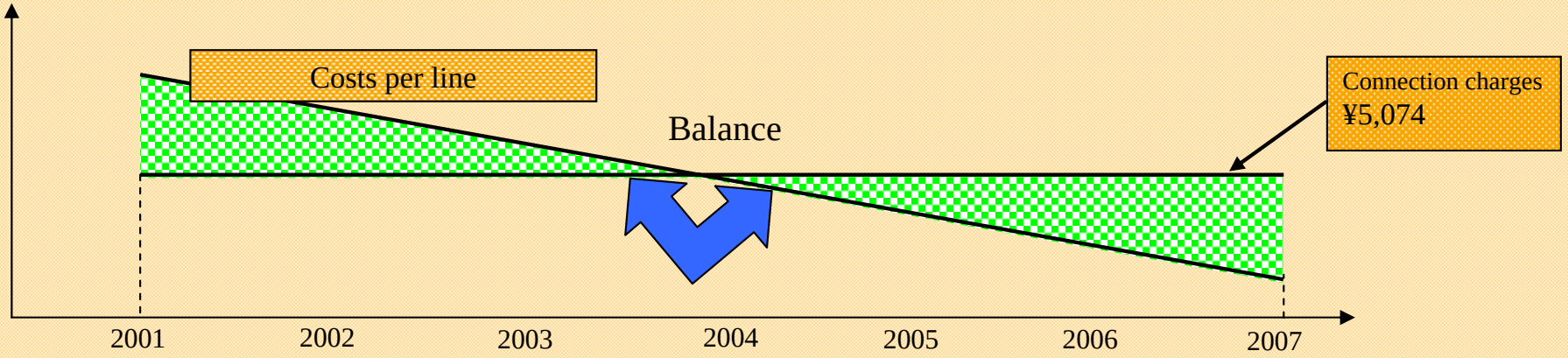
Possible for maximum of 5 years

Actual cost system (2) (future prime cost system)

2 Concrete example of future prime cost system ~subscriber dark fiber~

- August 2001, Approval of connection charges from 2001 ~ 2007
  (7 year period)
  [Connection charges]　¥5,074 (monthly charge per subscriber line)

- In principle, there is a maximum length of 5 years, but as it was shown that by calculating based on 5 year period would take it beyond the connection charges before calculation, approval was given to calculate over a 7-year period, forecasting a rise in demand.



Connection Conditions

With regard to connecting with other carriers, companies installing type 1 designated telecommunications facilities (NTT East/West) must determine connection terms related to connection charges and connection conditions and receive the approval of the MIC Minster (Telecommunications Business Law article 33 item 2)

Items determined by connection terms (Telecommunications Business Law article 33 item 4)

0 Connection charges by function
1 Technical conditions in standard connection locations
2 Items concerning responsibilities of carriers
3 Differences with carriers setting charges
4 Procedures when billing connections with other companies
- **Procedures when receiving necessary information**
- **Standard processing terms until connections started after billing connection etc.**

5 Procedures when applying for collocation
- **Procedures when receiving necessary information**
- **Procedures where construction and maintenance are by another company**
- **Standard processing period for construction**
- **Costs for collocation (space costs, power costs etc.)**
- **Maintenance costs etc.**

6 Procedures when using pillars
7 Procedures when using internal wiring installed by type 1 designated carriers
8 Items related to responsibility of users
9 Method of treating vital communications
10 Various application formats
11 Procedures when debate does not resolve the issue
12 Others, rights and duties of other carriers are closely related to connection conditions.