

(Unofficial and tentative translation)

**Guidelines Related to Operation of the Institution for Category II designated telecommunications facilities**

March 2010

Ministry of Internal Affairs and Communications

Ministry of Internal Affairs and Communications has formulated, after receiving the Information and Communication Council's (ICC) report on "How Connection Rules Should Be in Meeting Changes in the Telecommunication Market Environment" (October 16, 2009; ICC No. 69), "Guidelines Related to Operation of the Institution for Category II designated telecommunications facilities" (hereinafter referred to as the "Guidelines").

**No. 1 Introduction**

**1. Purpose**

The purpose of Guidelines is to encourage fair competition in the telecommunication market by clarifying the method used to calculate the amount of money (hereinafter referred to as "interconnection charges") received by telecommunications carriers (hereinafter referred to as "Category II designated carriers") that have installed Category II designated telecommunications facilities provided for in the Telecommunications Business Act (1984 Law No. 86; hereinafter referred to as the "Law"), Article 34, Item 3, No. 4, and the idea of setting of unbundling<sup>1</sup> and standard interconnection points, etc. in relation to connecting with Category II designated telecommunications facilities in attempting to promote the convenience of telecommunication service users.

**2. Objective business operators**

Guidelines is intended for Category II designated carriers.. However, if any telecommunication carriers conduct an unfair treatment in interconnecting telecommunications facilities, and such a treatment treating falls into provisions of the Law, Article 29, Item 1, No. 10, they could be subjected to an order the telecommunications carrier to improve the methods of conducting its business activities. It is therefore considered to be appropriate that in addition to Category II designated carriers, mobile telephone operators as well be taken into account in a positive manner with respect to Guidelines while also paying attention to the possibility of verifying interconnection charges s.

**No. 2 Unbundling**

**1. Basic idea**

Networks are becoming increasingly versatile and are being constantly upgraded, with functions that another carrier requests from a Category II designated carrier for use in a one-sided manner becoming more important, thus resulting in occurrences of disputes about unbundling. In the light of that and for other reasons an arrangement concerning unbundling has been made, as described in No. 2, 2, as well as "functions desirably unbundled", as described in No. 2, 3, and "functions to monitor", as described in No. 2, 4, decided upon.

Incidentally, taking into account characteristics of mobile telecommunication field, in which no bottleneaking has been recognized to occur with Category II designated telecommunications facilities , unlike with Category I designated telecommunications facilities , and service competition has made progress to a certain extent in the mobile telecommunication market, arrangement concerning unbundling includes the point of view of respecting consensus building through discussions between carriers and encouraging them.

## **2. Arrangement concerning unbundling**

### **(1) Decision criteria**

- a. If another business operator requests for a function to be unbundled and it is technologically possible it is the most desirable that the relevant function is unbundled within a range which does not impose any excessive financial burden on the Category II designated carrier. However, this is limited to, while excluding any functions concerning services which are in demand during their start-up period, functions concerning services of great necessity/importance (examples: functions concerning a service that greatly increases user convenience; functions concerning a service that desirably should be supplied by various business operators from the point of view of encouraging fair competition; functions concerning a service that are actually being utilized by a large number of users).
- b. Even if a certain function is applicable to being a “function desirably unbundled” it is the most appropriate to try not to increase the risk of the relevant Category II designated carrier failing to recover their investment by proceeding with any system developments, alteration in general contractual conditions with regard to interconnections, etc. by the Category II designated carrier by using as a precondition a concrete request for a preliminary survey from another carrier.

### **(2) Process**

- a. After formulating Guidelines the Ministry of Internal Affairs and Communications will first put in position a function considered to satisfy the decision criteria shown in No. 2, 2, (1) as a “function to monitor” and will then observe the condition of discussions between carriers for a specific period of time. If the decision is then made tha consensus will probably not be reached through discussions between carriers it will make a final decision on whether or not to position it as a “function desirably unbundled.”
- b. Ministry of Internal Affairs and Communications will regularly review any functions applicable to being “functions desirably unbundled” and “functions to monitor.”In any reviews the attempt will be made to secure fairness/transparency in the procedure via implementation of public comments and so on.

## **3. Functions desirably unbundled**

The functions listed in [1] through [4] below are applicable to being functions

desirably unbundled.

- [1] Voice connection function
- [2] ISP connection function
- [3] Layer 3 connection function
- [4] Layer 2 connection function

#### **4. Functions to monitor**

The functions listed in [1] through [6] below are applicable to being functions to monitor.

- [1] Charge information supply function
- [2] Billing function/content information fee recovery substitution function
- [3] Large-capacity content delivery function
- [4] Constant GPS positional information provision function
- [5] SMS connection function
- [6] Mobiletelephone e-mail transfer function

#### **5. Items to keep in mind with discussions between carriers**

- (1) The interconnection charges level
  - a. According to the provisions of the Law, Article No. 34, Item 3, No. 4, the interconnection charges level is required not to exceed reasonable costs under efficient management plus reasonable profits
  - b. If the interconnection charges level is debated during a discussion between carriers it would be appropriate to, after drawing a clear distinction between the method of calculation and the data to be substituted, regarding the former, verify the reasonableness of the plan, for example, to be presented by both the parties concerned in the light of the idea shown in No. 3 and, for the latter, show the information as widely as possible.
- (2) Content, method and period of system development, etc. required for interconnection
  - a. The content, method and period of any system developments, etc. required for the pertinent interconnection should be restricted to within the range recognizable as being necessary from the point of view of reasonableness.
  - b. If the content, method or period of the development required for the interconnection is debated during a discussion between carriers it would be appropriate to attempt to ensure no discrepancies arise in the mutual understanding of opinions by attempting to hasten/elaborate upon the review as far as possible by ensuring personnel from the technical development section (including the development related technicians of the trustee) are directly involved and so on.
- (3) Cost of the system development, etc. required for interconnection and method it is borne
  - a. The cost of the system development, etc. required for the interconnection should

be restricted to being within the range recognizable as necessary from the point of view of reasonableness. In addition, and regarding the method it is borne, if any additional cost accompanies a request for interconnection, in principle the interconnection carrier should bear his due share; if the developed system, etc. will be shared with another interconnection carrier, however, measures such as applying proportional distribution to the method of bearing the relevant additional cost and so on will then be required from the point of view of fairness.

- b. If the cost of the system development, etc. required for the interconnection is debated during a discussion between carriers it would be appropriate to enable the necessary function to be selected by presenting the cost per subdivided function and so on instead of the overall cost only. It would also be appropriate to take necessary measures such as imposing a mutual confidentiality agreement on the parties concerned and so on as well as securing objectivity in verifying the amount of money needed and then making public as much information of its breakdown as possible.

### **No. 3 Method of calculating the interconnection charges**

#### **1. Basic idea**

##### (1) Objective of interconnection charges

- a. The objectives of the idea revealed in No. 3 are interconnection charges concerning the functions listed in No. 2, 3, [1] through [4].

Incidentally, interconnection charges for other functions naturally are required not to exceed reasonable costs under efficient management plus reasonable profits, according to the provisions of the Law, Article No. 34, Items 3, No. 4.

- b. The objectives of the idea revealed in No. 3 concern interconnection charges in and after the year 2010. With interconnection charges in the year 2009 too, however, it is appropriate to as far as possible clarify the grounds for the relevant calculation for the Ministry of Internal Affairs and Communications using the format provided in the Separate Table No. 2.

##### (2) Composition of interconnection charges

The interconnection charges are set per function within a range that should not exceed the amount obtained by prorating an amount after adding a profit calculated according to the idea revealed in No. 3, 4 to the prime cost of the interconnection charges calculated according to the idea revealed in No. 3, 2 and 3 with respect to the demand calculated according to the idea revealed in No. 3, 5.

(3) Calculation period of interconnection charges

The calculation period of the interconnection charges will in principle be 1 year. The interconnection charges are in principle calculated based on the value of the actual results of the year preceding the year when the relevant interconnection charges is applicable.

(4) Terms

The terms listed in [1] through [20] below used in No. 3 concern examples of terms used in Telecommunications Business Accounting Rules (1985 Ministry of Posts and Telecommunications ordinance No. 26), Separate Table No. 1 (Chart of Accounts Table) and Separate Table No. 2 (Financial Statement Formats).

[1] Fixed assets	[11] Facilities maintenance expenses
[2] Investments and other property	[12] Common expenses
[3] Supplies	[13] Administrative expenses
[4] Debts	[14] Test and research expenses
[5] Corporate bonds	[15] Amortization of research expenses
[6] Loans	[16] Depreciation
[7] Net assets	[17] Fixed assets elimination
[8] Business expenses	[18] Communications facilities use charges
[9] Sales expenses	[19] Taxes and public dues
[10] Operation expenses	[20] Non-business expenses

## 2. Prime cost of interconnection charges

(1) Calculation process

The prime cost of the interconnection charges shall be calculated using the 3-step process shown in No. 3, 2, (2) and (3). However, even if the process adopted by the Category II designated carrier is not completely identical to the 3-step process it will not immediately be negated if the content of the cost included in the finally calculated prime cost of the interconnection charges is approximately the same.

(2) Voice connection function

a. Step 1 involves extraction of the cost concerning voice transmission services via deducting the cost concerning data transmission services from the overall cost (limited to business expenses; hereinafter the same) of the mobile telecommunication service.

(a) The overall cost of the mobile telecommunication service can be divided into facility, business, and indirect costs. Operation expenses, facilities maintenance expenses, test and research expenses, amortization of research expenses, depreciation, fixed asset elimination, communications facilities use charges and tax and public dues relate to being the facility cost, the sales expenses relates to being the business cost, and the common expenses and administration expenses relate to being the indirect cost.

- (b) The cost related to the voice transmission service and data transmission service is apportioned to each service using the standards listed in Separate Table No. 1 or any other appropriate standards.
- b. Step 2 involves the traffic-linked cost being extracted by deducting the contracted number-linked cost from the cost of the voice transmission service.
  - (a) The facility cost includes the cost (examples: cost of the service control device; cost of the position registration signal; cost of the customer/charge system) of the facility exclusively used by the individual contractor and the business cost includes the cost of billing/collecting the charge and the cost of securing the basic charge income as being relevant to the contracted number-linked cost.
  - (b) If there is anything that is difficult to clearly sub-total (including the indirect cost) in the contracted number-linked cost or the traffic-linked cost it should be sub-totaled within the contracted number-linked cost or traffic-linked cost using the standards listed in Separate Table No. 1 or any other appropriate standards.
- c. Step 3 involves extraction of the prime cost of the interconnection charges objective cost via deducting the prime cost of interconnection charges un-objective cost from the traffic-linked cost, which is then assumed to be the prime cost of the interconnection charges.
  - (a) The prime cost of the interconnection charges un-objective cost can be specified based on the idea shown in No. 3, 3.
  - (b) If there is anything that is difficult to clearly sub-total (including the indirect cost) in the interconnection charges un-objective cost or prime cost of the interconnection charges objective cost it should be sub-totaled within the interconnection charges un-objective cost or prime cost of interconnection charges objective cost using the standards listed in Separate Table No. 1 or any other appropriate standards.
- (3) ISP connection function, Layer 3 connection function, and Layer 2 connection function
  - a. Step 1 involves extraction of the cost of the data transmission service by deducting the cost of the Voice transmission service from the overall cost of the mobile telecommunication service.
    - (a) The overall cost of the mobile telecommunication service can be divided into facility, business, and indirect costs. Operation expenses, facilities maintenance expenses, test and research expenses, amortization of

research expenses, depreciation, fixed asset elimination, communications facilities use charges and tax and public dues relate to being the facility cost, the sales expenses relates to being the business cost, and the common expenses and administration expenses relate to being the indirect cost.

- (b) The cost related to the voice transmission service and data transmission service is apportioned to each service using the standards listed in Separate Table No. 1 or any other appropriate standards.
- b. Step 2 involves extraction of the band width billing objective cost by deducting the band width billing un-objective cost from the cost of the data transmission service.
- (a) The facilitycost includes the cost (examples: cost of the service control device; cost of the position registration signal; cost of the customer/charge system) of facilities exclusively used by the individual contractor and the cost (example: cost of the facility for the Category II designated carrier to provide an Internet connection service) of facilities not used by the interconnection carrier and the business cost includes the cost of billing/collecting the charge and the cost of securing basic charge income as being relevant to the band width billing un-objective cost.
  - (b) If there is anything that is difficult to clearly sub-total (including the indirect cost) in the band width billing un-objective or band width billing objective costs it should be sub-totaled within the band width billing un-objective or band width billing objective costs using the standards listed in Separate Table No. 1 or any other appropriate standards.
- c. Step 3 involves extraction of the prime cost of the interconnection charges objective cost by deducting the prime cost of interconnection charges un-objective cost from the band width billing objective cost, which is then assumed to be the prime cost of the interconnection charges.
- (a) The prime cost of interconnection charges un-objective cost can be specified based on the idea shown in No. 3, 3.
  - (b) If there is anything that is difficult to sub-total (including the indirect cost) in the interconnection charges un-objective cost or prime cost of the interconnection charges objective costs it should be sub-totaled within the interconnection charges un-objective or prime cost of the interconnection charges objective cost using the standards listed in Separate Table No. 1 or any other appropriate standards.

### **3. Prime cost of interconnection chargesun-objective cost**

- (1) Business cost

The interconnection charges are conceived to be the facility use charges. The appropriate prime cost is basically a facility cost, and hence no business cost should in principle be calculated into the prime cost of the interconnection charges. However, the business costs listed in [1] through [3] below contribute to the stable operation or efficient deployment of facilities, and hence can belong to facilities, and thus including them when calculating the prime cost of the interconnection charges is permissible.

[1] Business cost of telecommunication enlightenment activities

The business cost of telecommunication enlightenment activities (example: handheld telephone classrooms held to enlighten people on how to deal with specified electronic mail, means of communication after disasters, etc.) involves a contribution being made to the stable operation of facilities via ensuring sound utilization of telecommunication services and alleviating the concentration of any burden on facilities in specific areas/times.

[2] Business cost of amassing information for the purpose of area upgrades/improvements

The business cost of amassing information (example: reception of information on dead areas) for the purpose of area upgrades/improvements involves a contribution to more efficient deployment of facilities by complementing surveys/plans on area upgrades/improvements.

[3] Business cost of disseminating frequency reorganization

The business cost of disseminating frequency reorganization involves a contribution to the more efficient deployment of facilities by encouraging the smooth implementation of any frequency reorganizations that necessitate facilities modifications, etc.

(2) Facility cost

Even if a facility cost, and is listed in [1] through [3] below or is similar, it is inappropriate to request another carrier to bear the burden as interconnection charges and hence should not be calculated into the prime cost of the interconnection charges.

[1] Communications facilities use charges (except for any involved in the actual company's network)

[2] Facility cost that another carrier bears (example: cost of POI lines)

[3] Facility cost of additional functions (example: automatic telephone answering function)

#### 4. Profit

(1) Composition of profit

The amount of profit shall be the total amount of the borrowed capital cost, the own capital cost, and profit tax.

(2) Borrowed Capital Cost



- a. The borrowed capital cost shall be calculated according to the following formula.  

$$\text{Borrowed capital cost} = \text{Rate base pertaining to functions} \times \text{Borrowed capital ratio} \times \text{Borrowed capital interest rate}$$
  - b. The rate base of a function is the total amount of the net value of fixed assets, deferred assets, investments and other property, supplies and working capital related to said function.
  - c. The net fixed asset value of a function can be calculated based on the amount obtained by deducting an amount equivalent to the depreciation from the acquisition cost of fixed assets related to the relevant function.
  - d. The fixed asset, deferred asset, investment and other assets and inventory of a function are limited to those indispensable in the administration and management of the Category II designated telecommunications facilities of the relevant function and from which a profit cannot be expected.
  - e. The amount of operating capital of a function is the business expenses indispensable in the administration and management of the Category II designated telecommunications facilities of the relevant function during the average period of the relevant function being provided through to receipt of the interconnection charges for the relevant function. Depreciation, fixed asset disposal and taxes and public charges are excluded, however.
  - f. The borrowed capital ratio shall be calculated based on the actual value of the proportion of liabilities to the total liabilities and shareholders' equity.
  - g. The borrowed capital interest rate shall be the weighted average of the interest rate of bonds and borrowings (hereinafter referred to as "liabilities with interest") and the equivalent interest rate of liabilities other than liabilities with interest, with respect to the respective ratios of liabilities with interest and liabilities other than liabilities with interest to the total liabilities.
  - h. The interest rate of liabilities with interest set forth in the preceding paragraph shall be calculated based on the actual proportional value of the amount pertaining to liabilities with interest included in non-operating expenses to liabilities with interest .
  - i. The equivalent interest rate of liabilities other than the liabilities with interest shall be the value for which the nature of said liabilities and the yield reasonably expected in managing safe assets are taken into consideration.
- (3) Own capital cost
- a. The amount of the own capital cost shall be calculated according to the following formula. 
$$\text{Own capital cost} = \text{Rate base pertaining to said functions} \times \text{Capital ratio} \times \text{Return on equity}$$

- b. The capital ratio shall be obtained by subtracting the borrowed capital ratio from 1.

- c. The return on equity shall be calculated based on expected return on equity calculated according to the following formula. However, this does not preclude the stock price being used instead of the actual return on equity.

Expected return on equity = Average interest rate of low-risk financial products +  $\beta$  × (Average return on equity of major companies – Average interest rate of low-risk financial products)

- d.  $\beta$  shall be a reasonable value based on the numerical value measured based on the fluctuation of the actual return on equity of the category II designated business carrier compared with the fluctuation of the actual return on equity of major companies with the risk relate to the mobile telecommunication business and the risk relate to taken into consideration. However, this does not preclude the stock price being used instead of the actual return on equity. .
- e. The value of the average interest rate of low-risk financial products and that of average return on equity of major companies less the average interest rate of low-risk financial products can be calculated based on the actual resulting values over a somewhat long period of time.

(4) Profit tax

- a. The amount of profit tax shall be calculated according to the following formula.  
$$\text{Profit tax} = (\text{Own capital cost} + (\text{Amount of liabilities other than liabilities with interest} \times \text{Equivalent interest rate})) \times \text{Profit tax rate}$$
- b. The profit tax rate shall be the calculated value based on the total of the tax rate of corporate tax, business tax, and tax on other income.

**5. Demand**

(1) Voice connection function

The demand for the interconnection charges of the voice connection function involves the total communication time. The total communication time can be calculated with consideration given to the difference in use of facilities due to the difference in the communication path between in-own network calls and interconnection calls.

(2) ISP connection function, Layer 3 connection function, and Layer 2 connection function

The interconnection charges for the ISP connection function, Layer 3 connection, and Layer 2 connection function are based on band width billing in billing units for a specific band width with the demand therefor then being the total band width reasonably calculated using the network's data transmission capacity.

## **6. Grounds for calculation**

When a Category II designated carrier reports their general contractual conditions for interconnections, including the content of setting or altering interconnection charges for an voice connection function, ISP connection function, Layer 3 connection function or Layer 2 connection function it is appropriate that they should in principle clarify the grounds for the calculations for the Ministry of Internal Affairs and Communications using the format of Separate Table No. 2.

Incidentally, if the grounds for calculation of the interconnection charges are provided the Ministry of Internal Affairs and Communications will then carry out the necessary verifications as to whether calculation of the relevant interconnection charges complies with the idea shown in the Guidelines or not.

## **No. 4 Setting of standard interconnection points, etc.**

### **1. Basic idea**

The basic idea with the setting and installation of interconnection points is an attempt to encourage it by placing value on consensus building through discussions between carriers, taking into account the situation that, in addition to the characteristics of the mobile communication field, there are less cases causing problems of fair competition with the setting and installation of interconnection points than with unbundling, even under the Institution for Category **I designated telecommunications facilities**.

### **2. Items to keep in mind with discussions between carriers**

It is desirable that standard interconnection points and so on should continue to be appropriately set in a timely manner in response to requests from the other carriers. However, the setting of standard interconnection points necessitates new system developments, etc. and can thus result in an additional financial burden to both the parties concerned, and hence the most appropriate is that it occurs with the precondition of a concrete request from a relevant interconnection carrier.

## **No. 5 Other**

Ministry of Internal Affairs and Communications will continue to review Guidelines as necessary in the future from the point of view of constantly attempting to further clarify the idea involved in the method of calculating the interconnection charges, etc.

- <sup>1</sup> A function concerning interconnection with the Category II designated telecommunications facilities that enables subdivided use of only those required by the other carrier.
- <sup>2</sup> A function that enables an Internet connection service to be provided using a browser included on a mobile telephone terminal via an ISP interconnecting the mobile telephone carrier's telecommunication circuit facilities and ISP's telecommunication facilities through an interconnection point.
- <sup>3</sup> A function that enables a data transmission service to be provided by an MVNO by interconnecting a mobile telephone carrier's telecommunication circuit facilities and the MVNO's telecommunication facilities via the OSI reference model's 3rd layer (network layer).
- <sup>4</sup> A function that enables a data transmission service to be provided by an MVNO by interconnecting a mobile telephone carrier's telecommunication circuit facilities and the MVNO's telecommunication facilities via the OSI reference model's 2nd layer (data link layer).

**Separate Table No. 1**

		Standard	
Facility cost	Operation expenses	Number of subscriptions ratio or transaction volume ratio (refers to frequency ratio or number of mails ratio; hereinafter the same in this table)	
	Facilities maintenance expenses	Related fixed asset value (refers to acquisition cost; same for testing and research, research depreciation, common costs and administration costs) ratio	
	Test and research expenses	Business profit ratio or related expenditure ratio or fixed asset value ratio	
	Amortization of research expense	Ditto	
	Depreciation	Related fixed asset value (refers to book value; same for fixed asset disposal and fixed asset tax, etc.) ratio	
	Fixed assets elimination	Related fixed asset value ratio	
	Communications facilities use charges	Number of lines ratio or transaction volume ratio	
	Taxes and public dues	Fixed asset tax, etc. Office tax	Related fixed asset value ratio Personnel expenditure ratio of administration section, etc.
Business cost	Sales expenses	Contact	Ratio of the number of instances of contract applications, etc.
		Charge	Ratio of number of instances of charge demands
		Sale	Ratio of the number of instances of sales
		Other	Number of subscriptions ratio, transaction volume ratio or number of lines ratio
Indirect cost	Common expenses	Related fixed asset value ratio or personnel expenditure ratio or expenditure ratio of business, operating or facilities maintenance section	
	Administration expenses	Related fixed asset value ratio or personnel expenditure ratio or expenditure ratio of business, operation, facilities maintenance or common section	

(Note) The related fixed assets shall be apportioned to each service using the transaction volume ratio or any other appropriate standard.

**Separate Table No. 2**

**Format 1 Cost sub-total of Step 1 (in yen)**

		Total cost of mobile telecommunication business operation		
			Cost of voice transmission service	Cost of data transmission service
Facility cost	Operation expenses			
	Facilities maintenance expenses			
	Test and research expenses			
	Amortization of research expense			
	Depreciation			
	Fixed asset disposal elimination			
	Communications facilities use charges			
	Taxes and public dues			
	Total			
Business cost	Sales expenses			
Indirect cost	Common expenses			
	Administration expenses			
	Total			
Grand total				

**Format 2 Cost sub-total of Steps 2 and 3 (voice connection function) (in yen)**

		Cost of voice transmission service				
			Number of contracts-linked cost	Traffic-linked cost	Prime cost of interconnection charges	
					Prime cost of interconnection charges un-objective cost	Prime cost of interconnection charges
Facility cost	Operation expenses					
	Facilities maintenance expenses					
	Test and research expenses					
	Amortization of research expense					
	Depreciation					
	Fixed asset disposal elimination					
	Communications facilities use charges					
	Taxes and public dues					
	Total					
Business cost	Sales expenses					
Indirect cost	Common expenses					
	Administration expenses					
	Total					

Grand total					
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**Format 3 Cost sub-total of Steps 2 and 3 (ISP connection, Layer 3 connection, and Layer 2 connection functions) (in yen)**

		Cost of data transmission service				
			Band width billing un-objective cost	Band width billing objective cost	Prime cost of interconnection charges un-objective cost	Prime cost of interconnection charges
Facility cost	Operation expenses					
	Facilities maintenance expenses					
	Test and research expenses					
	Amortization of research expense					
	Depreciation					
	Fixed asset disposal elimination					
	Communications facilities use charges					
	Taxes and public dues					
	Total					
Business cost	Sales expenses					
Indirect cost	Common expenses					
	Administration expenses					
	Total					
Grand total						

(Note) This shall be created per function.

**Format 4 Adequate profit**

1 Base rate of the function

Item	Amount of Money (in Yen)	Remarks
Base rate of the function		
Net value of fixed assets of the function		
Deferred assets of the function		
Investment and other assets of the function		
Inventory of the function		
Operating capital of the function		

(Note 1) This shall be created per function.

(Note 2) Enter the typical average period of the function being provided through to receipt of the interconnection charges for the relevant function in the "Remarks" column of operating capital.

## 2 Borrowed capital cost

Item	Value (in Yen or Percent)	Remarks
Borrowed capital cost		
Base rate of the function		
Borrowed capital ratio		
Borrowed capital interest rate		
Interest rate for interest-bearing debt		
Interest-equivalent rate of debt other than interest-bearing		

(Note 1) This shall be created per function.

(Note 2) Enter [1] the amount of the debt and [2] the amount of net assets in the “Remarks” column of the borrowed capital ratio.

(Note 3) Enter [1] the amount of interest-bearing debt and [2] the amount of any non-business expenses for the interest-bearing debt in the “Remarks” column of the interest rate for interest-bearing debt.

(Note 4) Enter the amount of debt other than interest-bearing in the “Remarks” column of the interest-equivalent rate of debt other than interest-bearing debt.

## 3 Own capital cost

Item	Value (in Yen or Percent)	Remarks
Own capital cost		
Base rate of the function		
Own capital ratio		
Own capital profit ratio		

(Note 1) This shall be created per function.

(Note 2) Enter [1]  $\beta$ , [2] the average interest rate of low risk finance and [3] major companies’ average proprietary capital profit ratio in the “Remarks” column of proprietary capital profit ratio.

## 4 Profit tax

Item	Value (in Yen or Percent)	Remarks
Profit tax		
Own capital cost		
Profit tax rate		
Amount of liabilities other than liabilities with interest $\times$ Equivalent interest rate		

(Note) This shall be created per function.

## 5 Profit

Item	Value (in Yen or Percent)	Remarks
Profit		
Borrowed capital cost		
Own capital cost		
Profit tax		

(Note) This shall be created per function.

**Format 5 Demand (voiceconnection function)**

Item	Value (in Seconds)	Remarks
Communication time of in-own network calls		
Communication time of interconnection calls		

(Note) Enter the values before any difference in use of the facility is considered.

**Format 6 Demand (ISP connection, Layer 3 connection, and Layer 2 connection functions)**

Item	Value (in Mbps)	Remarks
Demand		

(Note 1) This shall be created per function.

(Note 2) Enter a summary on the method of calculating demand in the "Remarks" column.

**Format 7 Interconnection charges (voice connection function)**

Item	Value (in Yen)	Remarks
Interconnection charges	(In area: Out of area: )	
Prime cost of interconnection charges		
Profit		

(Note) If the in-area and out-of-area interconnection charges are set enter their amounts together in the "Value" column of the interconnection charges and enter the method of calculating them in the "Remarks" column of the interconnection charges.

**Format 8 Interconnection charges(ISP connection, Layer 3 connection, and Layer 2 connection functions)**

Item	Value (in Yen)	Remarks
Interconnection charges	(In area: Out of area: )	
Prime cost of interconnection charges		
Profit		

(Note) This shall be created per function.