Japan’s Best Practice for Telecommunications Market

WTO Basic Telecommunications Agreement
10th Anniversary Symposium
Panel C: Regulatory Challenges/Best Practices

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Contents

0 Brief Introduction

1 Development of Regulatory Framework
   (1) Deregulations on Market Access
   (2) Asymmetric Regulations on Dominant Carrier

2 Future Challenges
Outline of Japanese Telecom Competition Policy

**From monopoly to competition**
- 1985 ~
  - Introduction of market principles
  - Privatization of NTT—PC

**Further promotion of competition**
- 1997 ~
  - Deregulation of market entry restriction (1997)
  - Abolition of foreign investment regulation (except for NTT and NTT regional companies) (1997)
  - Reorganization of NTT (1999)

**From “ex-ante” regulation to “ex-post” regulation**
- 2004 ~
  - Strengthening of asymmetric regulations
  - Establishment of USF mechanism
  - Setting up of Telecommunications Business Dispute Committee
  - Abolition of Type I and Type II business categories
  - Drastic deregulation of price and tariff regulations
  - Introduction of Competition review

**Future Challenges**
- Agreement on Basic Telecommunication
- Time limit for submitting Initial Offer
- Final conclusion of DDR

**Age of Telephony**
- Emergence of Internet
- Penetration of Mobile Communication
- Transition to Full IP-based networks

Review of competition rules through transparent procedures

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The Number of Japan’s service subscribers

【Telecommunication Service Users】

(Unit: thousand)

- Fixed Communications (telephony)
- Mobile Communications (telephony)
- Broadband service
- IP Telephony

※ As of June 2007

【Number of Broadband Service Users】

(Unit: thousand)

- DSL
- FTTH
- CATV
- FWA

Japanese Broadband Service in Global Comparison

Broadband prices (100kbit/s) (US dollar)

Source: ITU Internet Reports 2006 “digital.life” (December 2006)

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Development of Regulatory Framework

(1) Deregulations on Market Access
Deregulations on Japanese Telecommunications Market

Restrictions on Foreign Capital Participation

<table>
<thead>
<tr>
<th>Year</th>
<th>NTT (Type I)</th>
<th>KDD (Type I)</th>
<th>Other Type I Carriers</th>
<th>Type II Carriers</th>
<th>Radio Stations for Telecom Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>Prohibited</td>
<td>Prohibited</td>
<td>1/3</td>
<td>No restriction</td>
<td>1/3</td>
</tr>
<tr>
<td>1992</td>
<td>Prohibited</td>
<td>1/5</td>
<td>abolished</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>Prohibited</td>
<td>1/3</td>
<td>abolished</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
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<td>1/3</td>
<td>abolished</td>
<td></td>
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<td>Prohibited</td>
<td>1/3</td>
<td>abolished</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Incumbent operator provided domestic telecom service exclusively
** Incumbent operator provided international telecom service exclusively

Market Access Procedures

**Type I Telecommunication Business**
Telecommunications business provided by facility-base
**Permission** from authorized Minister

**Type II Telecommunication Business**
Telecommunications business provided by service-base
**Notification or Registration** to authorized Minister

**Telecommunications Business**
All telecommunications business in Japan
**Notification or Registration** to authorized Minister
× **Permission** from authorized Minister

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The number of Competitive Carriers

Opening of the Japanese Telecom Market (1985)

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A. Sales Transition of Major Japanese Telecommunication Market

The sales of major telecommunications carriers have increased three-fold since 1985.

Note 1: The above diagram is created from the financial statements (total sales revenue) based on accounting regulations for telecommunication carriers submitted by carriers that provide basic telecommunication services and the financial reports based on the accounting regulations for telecommunication operations submitted by certified telecommunications carriers (the total sales profits of telecommunication businesses and other operations except for TEPCO showing only the sales profits for their telecommunication operations).

Note 2: The sales of NTT DoCoMo and the sales of KDDI fixed and each category of au were created by settlement short lines.
Japan’s Telecom Market (FY 2005) segment

B. Major mobile phone market

- **NTT DoCoMo**: ¥4.7659 trillion
  - **au**: ¥2.5103 trillion
  - **Vodafone**: ¥1.4693 trillion

- **Willcom**: ¥209.8 billion

C. Major long distance/international market

- **Japan Telecom**: ¥343.5 billion
- **KDDI**: ¥619.3 billion
- **NTT Com**: ¥1.1278 trillion
- **Space Communications**: ¥17.9 billion
- **JSAT**: ¥40.1 billion
- **Fusion**: ¥70.1 billion

D. Major local market

- **NTT East**: ¥2.1253 trillion
- **NTT West**: ¥2.296 trillion
- **J-COM Group**: ¥83.6 billion
- **K-Opticom**: ¥92.1 billion
- **CTC**: ¥32 billion
- **Other power companies**: ¥151.8 billion

- **Approx. ¥9 trillion**
- **Approx. ¥2.2 trillion**
- **Approx. ¥4.5 trillion**
Deregulations in Japanese Telecommunications Market

(2) Asymmetric Regulations on Dominant Carrier
Enhancement of Regulations on Dominant carriers

1.1 Prevention of anti-competitive practices in telecommunications

1.2 Safeguards

2.2 Interconnection to be ensured

2.3 Public availability of the procedures for interconnection negotiations

2.4 Transparency of interconnection arrangements

2.5 Interconnection: dispute settlement

1985

- Business improvement order
- Prohibition of unfair, discriminative treatment

1997

- Accounting separation
- Development of interconnection accounts

2000

- Firewall with dominant carriers

- Development of rules for interconnection
- LRIC
- Line sharing
- Unbundling rule for Fiber optics
- Authorization of interconnection tariffs
- Arbitration / Order by Minister
- Establishment of dispute settlement body for telecommunications carriers

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### NTT's Market Share

#### Share of facility (subscribers line) [as of 2007.3]

- Metal + Fiber optics: 92.5%
- Fiber optics only: 78.9%

#### Share of service [as of 2007.9]

- Fixed-line phone: 88.2%
- FTTH: 70.5%
- Mobile phone: 51.1%
  - NTT DoCoMo: 50%
  - Others: 37.4%
- DSL: 37.4%

#### Market share of broadband operator [as of 2007.9]

- FTTH (total): 13.8%
- FTTH (for FLAT): 2.5%
- FTTH (for detached residences, Business): 17.8%
- Others: 13.8%
The Era of Broadband

-Development of DSL service-

○ Unbundling rules are stipulated by detailed function and facility. e.g. Metal subscriber line, Optical subscriber line...
  >> Unbundling regulation on Access line has provided further opportunity of non-facility based supplier to enter telecom market.

○ At the same time, the provision of collocation rule has been established.
  >> Service suppliers who want to interconnect with major supplier can set up their facilities in the major supplier’s building

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Access Charge for Line sharing of DSL

(JPY)

Establishment of Line Sharing Regulation

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The Era of Broadband - Development of FTTH service -

(millions)

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Future Challenges
New Competition Promotion Program 2010

Comprehensive Review of Competition Rules to Address the Transition to IP Based Networks (Comprehensively implemented by early 2010s)

1. Promotion of Facility Competition

   - Review of Designated Telecommunications Facilities System

2. Review of Interconnection Policies

   - Review of Calculation Method for Interconnection Charges of NTT East and West
     - Review of Calculation Method for Calculating Interconnection Charge of PSTN (concluded in 2007)
     - Review of Calculation Method for Interconnection Charges for Fiber Optic Networks (dealt with after the submittal of an application by NTT East and West)

3. Review of Universal Service System

4. Review of Tariff Policies

5. Other Main Policies

   - Calculation method for interconnection charges in relation to next-generation networks
Network neutrality (from the user perspective)

(1) IP-based networks should be accessible to users and easy to use, allowing ready access to content and application layers.
(2) IP-based networks should be accessible and available to any terminal that meets the relevant technical standards, and should support terminal-to-terminal (or “end-to-end”) communication.
(3) Users should be provided with equality of access to telecommunications and platform layers at a reasonable price.

Note: In this case, “the user” refers not just to end users but also includes content providers and other related companies that conduct business using IP networks.

Policy evaluation parameters for ensuring network neutrality

- Equal access to networks
  - Neutrality of telecommunications layer with respect to other layers

- Equitable cost distribution of networks
  - Neutrality of cost sharing models for upgrading the communications networks

Specific policies deployed in an integrated manner for parameters
# Universal Service in the Transition to IP Networks

<table>
<thead>
<tr>
<th>Present</th>
<th>2010</th>
<th>early 2010s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensuring all regions can have broadband access (National Broadband Strategy 2010)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PSTN</strong></td>
<td><strong>IP Network</strong></td>
<td></td>
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<tr>
<td><strong>Service</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Subscriber line access</td>
<td>- Approximately 30 million FTTH subscribers (NTT mid-range corporate strategy)</td>
<td>- How public telephones and emergency notification will be handled with regard to the spread of IP</td>
</tr>
<tr>
<td>- Public telephones</td>
<td>- Market integration through the spread of broadband and IP (phased disappearance of service demarcation)</td>
<td></td>
</tr>
<tr>
<td>- Emergency calls</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Supply System</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provision by NTT East / West</td>
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<td></td>
</tr>
<tr>
<td><strong>Mechanisms for Preservation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost calculation which assumes PSTN (system where costs are borne in relation to the number of numbers owned)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Issues to be considered for the transition period</td>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>- Measures to replace number priority DB existing in the local central office</td>
<td>- How long will PSTN be preserved?</td>
<td></td>
</tr>
<tr>
<td>- The way to finance the cost for removing legacy networks.</td>
<td>- The way to preserve universality with regard to factors other than geographic disparity</td>
<td></td>
</tr>
</tbody>
</table>

**Scope to be included as universal provision**
- Inclusion and/or exclusion of mobile service, broadband service, IP phone service
- Rational of the change of the concept from "universal service" to "universal access"
- Voice service becomes just one component of broadband services

**Eligible Telecommunications Carriers (ETCs)**
- The way to ensure "last resort" of universal service provision
- Requirements for ETCs, taking into consideration factors such as the diversity of primary entities providing broadband infrastructure (ex: local governments), etc.
- Relationship between network maintenance costs and service maintenance costs
- Service area requirements ETCs are expected to meet
- Rational for fee regulations (price-cap system), etc.

**Cost Calculation Method**
- Cost calculation method for multiple transmission configurations (fixed, wireless, etc.)
- Measures for avoiding increased cost burdens upon users

**Cost Allocation Method**
- Rational for specifying beneficiaries and for cost allocation method in case the range of universal service is enhanced
Thank you.
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