

Government Regulation and Market Competition in the Broadband Market in Japan

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1. OUTLINE

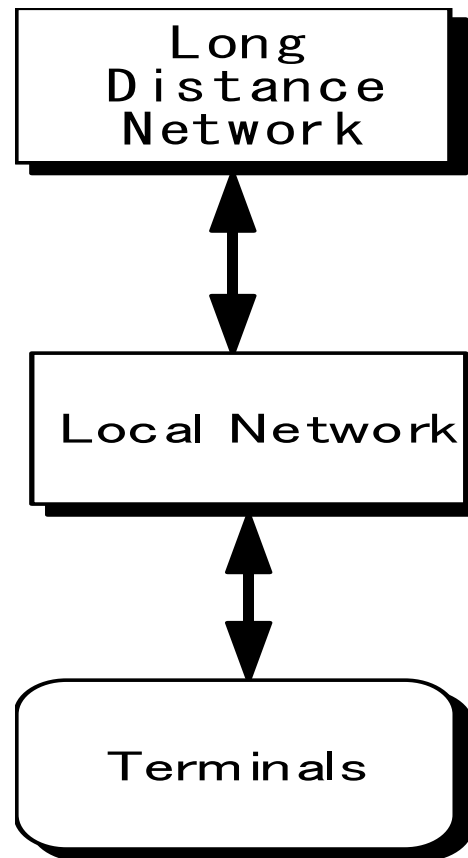
1. Evolution of Regulatory Policy
2. Evolution of Broadband Plans
3. Broadband Market
4. Policy Issues
5. JP competition policy

Note: Originally this PPT was presented at the PTC conference in Hawaii (January 2012).

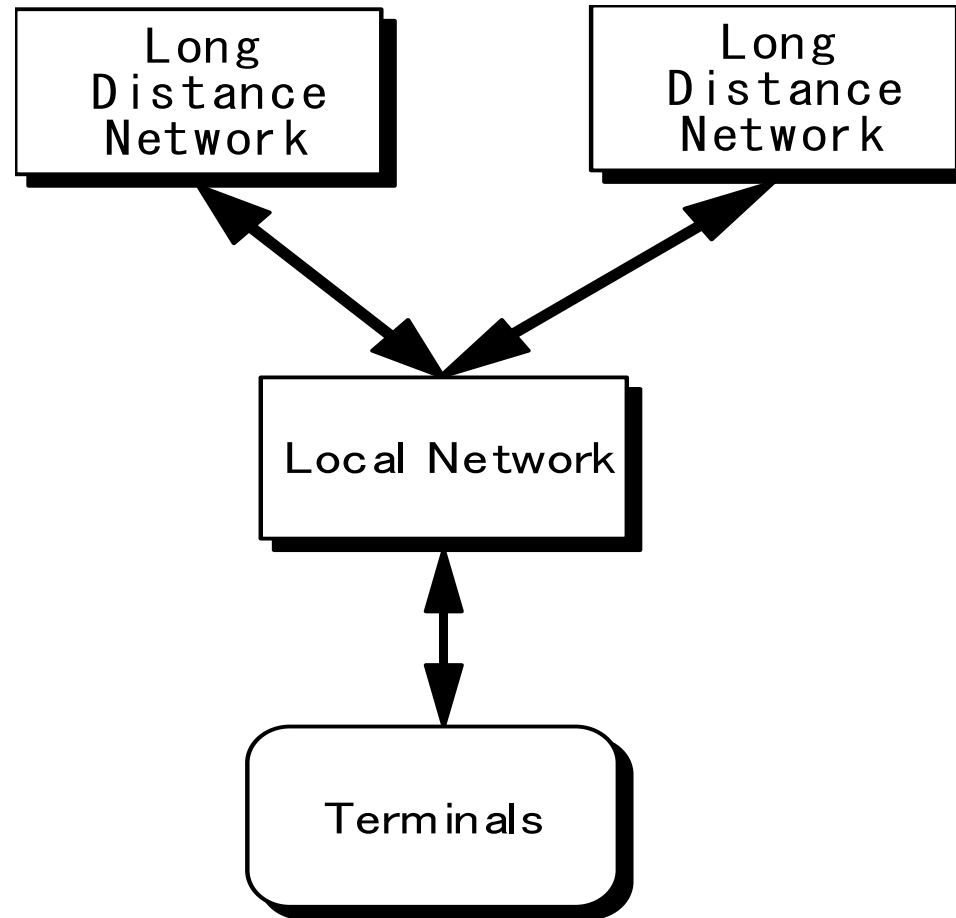
1. Evolution of Regulatory Policy

Before 1985 and After 1985
Asymmetric Regulation

Before 1985 NTT and KDD



After 1985, competition policy was introduced



Asymmetric Regulation

- ❑ Before 2004, all network carriers were regulated under the same rule.
- ❑ Asymmetric regulation was introduced then.
- ❑ In fixed network market, both NTT East and NTT West are categorized as dominant carrier.
- ❑ Network unbundling rules are started.

2. Evolution of Broadband Plans

- E-Japan
- U-Japan
- NGN
- New Broadband Super Highway

E-Japan and U-Japan

- E-Japan (September 2000)

All citizens can access to conventional Internet lines by 2001.

- U-Japan (May 2004)

In Ubiquitous Society, people can access network in any where at any time using several new wireless technologies.

Next Generation Network

□ Next Generation Network 2010

(August 2006)

- NGN (30 Mbps interactive broadband network) will penetrate 90 per-cent out of the total households in Japan by 2010 fiscal year.
- The penetration of broadband network to each household will be 100 per-cent by 2010 fiscal year.

“New Broadband Super Highway Plan” called “Hikari no Michi” 「光の道」

- “Hikari-no-Michi” (May 2010)

By 2015, over 100 Mbps network will penetrate all over the country.

Three Policy Objectives

(1) Promotion of over 100 Mbps FTTH network by 2015

One of the Options to achieve this target is to create the fully separated network company. It means restructuring NTT group.

(2) Review of Universal Service Mechanism

Analog telephone to IP telephone

PSTN to IP based network

Universal service to Universal Access

(3) To promote utilization of Broadband Network

Wire, Cable and Wireless

100 M network in 2015

By FTTH + HFC and BWA

Three Policy Options for this plan

1. Fully Structural Separation

Establishing independent, transparent and open network as a fully independent company.

2. Structural Separation within NTT

Separating network facility division from NTT East and NTT West.

3. Functional Separation

Functional separation of network division of NTT East and NTT West.

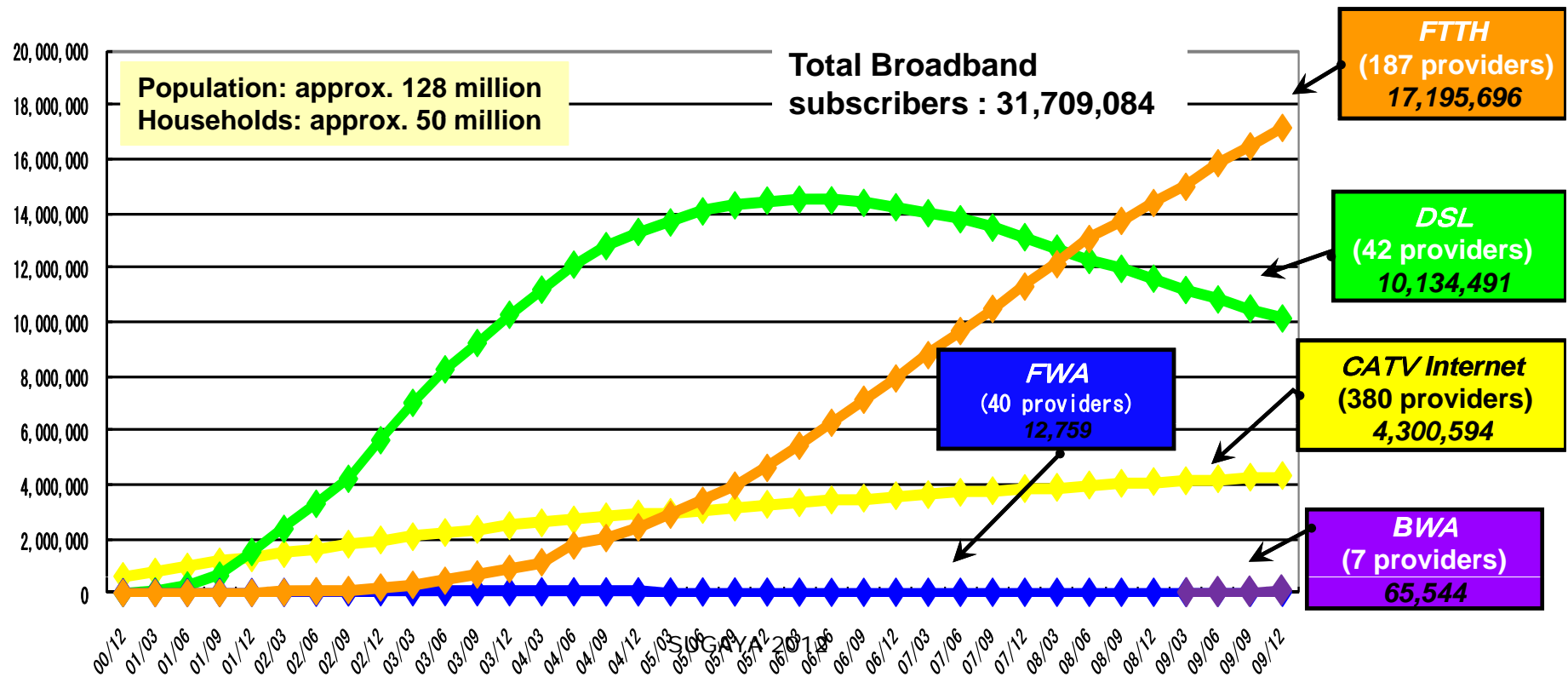
3. Broadband Market

- Overview
- ADSL and FTTH

Broadband Area Coverage and Subscription

	Area Coverage by Households (Estimation) March 2006	March 2007	March 2008	March 2009	FY2010 Targets (by March 2011)
Broadband	93.9 % (47.33 M households)	95.2 % (48.63 M households)	98.3 % (50.83 M households)	98.8 % (52.25 M households)	Made available in all the households
Ultra-High-Speed Broadband	79.7 % (40.15 M households)	83.5 % (42.68 M households)	86.5 % (44.71 M households)	90.1 % (47.65 M households)	90 %

These target will be achieved before the end of FY2010



Gap between Broadband Penetration and Subscription

- ❑ As of March 2011, broadband penetration rate is 93 percent.
- ❑ However, broadband subscription rate is still 38 percent.
- ❑ Japan is only one country having more than 50 percent share of FTTH in broadband market.

Broadband Market Share in 2011

NTT East and West	29.1 + 23.4 = 52.5%
Cable TV Networks	19.4
Softbank	9.3
E-Access	5.7
KDDI	5.2

FTTH Market Share in 2011

NTT East and West	$42.1 + 32.3 = 73.4$ %
KDDI	8.8
Others	17.8

ADSL Market Share in 2011

Softbank	38.4 %
NTT West + East	$17.3 + 17.6 = 34.9$
E Access	23.8
Others	2.9

Summary

- ❑ NTT's market share in the broadband market is over 50 percent in total.
- ❑ However, in ADSL, Softbank has the biggest share.
- ❑ In contrast, in FTTH, NTT is over 70 percent.
- ❑ As shown in the previous diagram, ADSL subscribers have been declined since 2008.

4. Policy Issues

ADSL, Cable, FTTH and WBA

Unbundling and Lower Access Charge

- ❑ Competition has been a core concept in telecommunication policy since 1985.
- ❑ However, incumbent carrier NTT is still dominant in the network layer.
- ❑ In ADSL market, Softbank still has the biggest share. It means that competition policy has been effective since 2000.

ADSL

- ❑ In general, there are two competitive policies. One is facility-based and the other is service-based competition.
- ❑ In case of ADSL, service-based competition was successful. Softbank has their own wireless network but no wired network. So it's ADSL service has been provided through the NTT's PSTN.

Cable

	nationwide	Mie	Ooita	Toyama	Gifu	Fukui	Nagasaki
Broadband Penetration	100.00%	100%	99.8%	100%	99.9%	100%	100%
Broadband Subscription in total	58%	58.3%	44.7%	60.6%	57.9%	62.2%	39.3%
Cable Subscription	12%	30.7%	30.7%	30.3%	27.6%	26.5%	25%

facility-based competition between NTT and Cable

- ❑ Cable share in broadband market is not huge. But there are some regions that cable network operators are competitive against the incumbent carrier, NTT.
- ❑ In some prefectures, local governments have provided financial support to construct the regional network by cable.

Migration and ADSL

- According to the NTT's plan, all PSTN will be replaced to IP network by around 2025.
- It means that all ADSL services using NTT's PSTN should be terminated within thirteen years.

Competition in FTTH market

- ❑ Why NTT is dominant in the FTTH market.
- ❑ It is because service-based competition is not active in this market.
- ❑ It is one of major reasons why Softbank insisted that government should set up fully separated FTTH network company.
- ❑ It means the divestiture of both NTT East and West.

Broadband Wireless Access

- ❑ Wi-MAX is categorized as a narrow definition of BWA. The number of subscribers is only 1.4 million in 2011.
- ❑ However, among 115 million mobile users in 2010, 57 million selected the flat rate package plan. It means that half of mobile users frequently access Internet through their mobile equipments.

Competition Policy in Super Broadband Market

- ❑ In order to promote service-based competition, some rules for accessing NTT's Fiber network should be reconsidered.
- ❑ The other option is to promote facility-based competition.

5. JP Competition Policy

Summary and Conclusion

Both facility-based and service-based competition are important policies to realize more competitive broadband market in Japan

- ❑ How service-based competition become more active in the super broadband market?
 - Equal access to the incumbent network
 - To promote information disclosure from the incumbent carriers.
 - Reliable firewall between network facility and network service sections in NTT East and West
- ❑ Facility-based competition between NTT fixed networks and cable and wireless networks is another option to be more competitive.

Gap between Penetration and Subscription rate in Broadband

- ❑ It is partially because young people use mobile equipments to access Internet.
- ❑ In education and medical, several regulations in their field do not allow to use electric information, but only paper based information is authorized.

Thank you very much



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