

ICT Policy Task Force for a Global Era Joint Hearing Explanatory Materials

November 9, 2010

Nippon Telegraph and Telephone Corporation
Nippon Telegraph and Telephone East Corporation
Nippon Telegraph and Telephone West Corporation

Encouraging ICT Use and the Expansion of Broadband

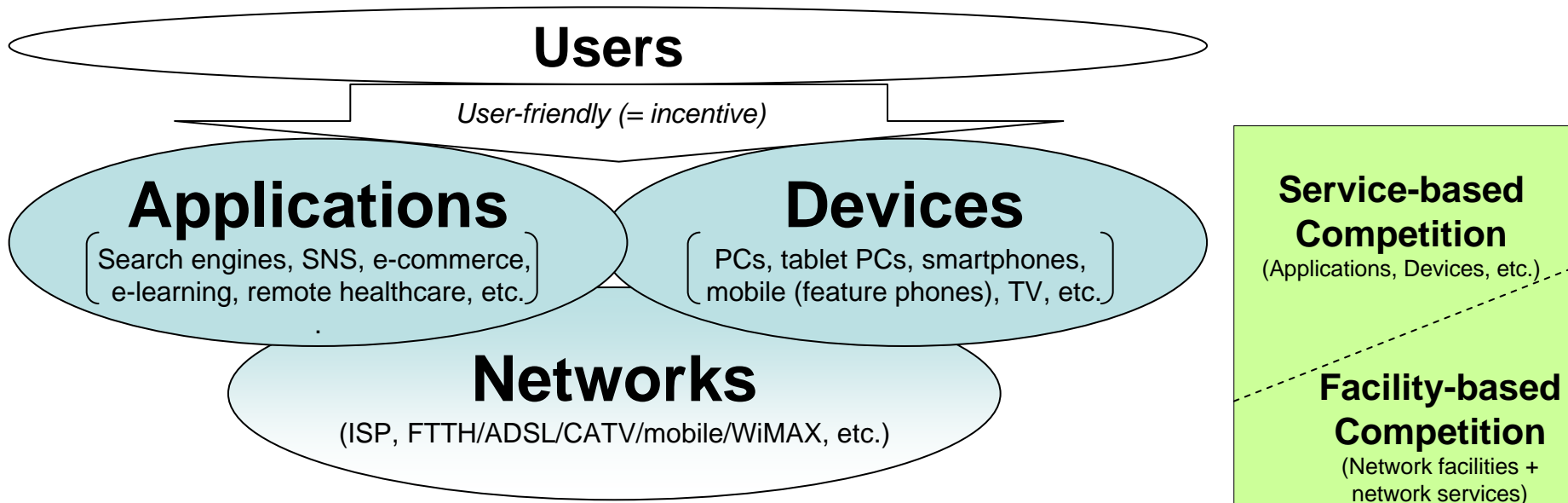
➤ NTT will actively direct efforts towards promotion of ICT use and expansion of broadband(fixed/mobile)

■ To promote use of ICT (broadband), it is important that user-friendly:

- ☞ devices
- ☞ application services
- ☞ network services

be provided to users through competition

■ Promotion of e-government is also necessary in central and local governments



World-leading levels of broadband services are realized and advancing

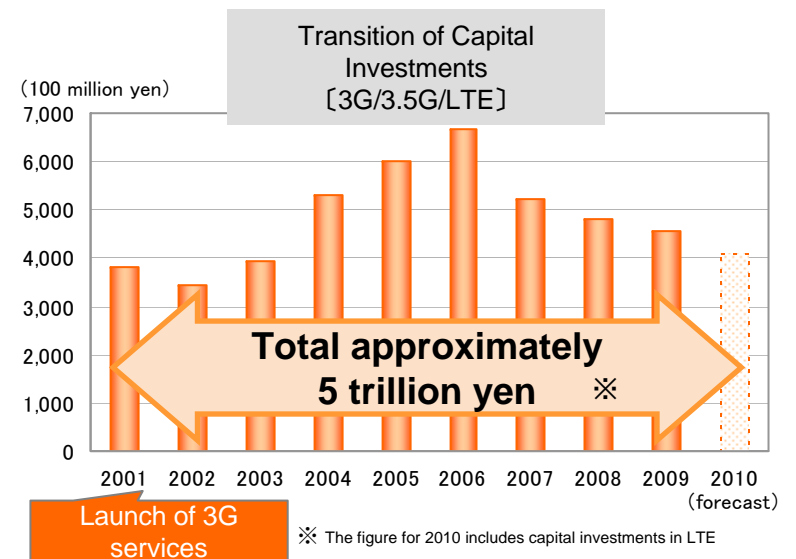
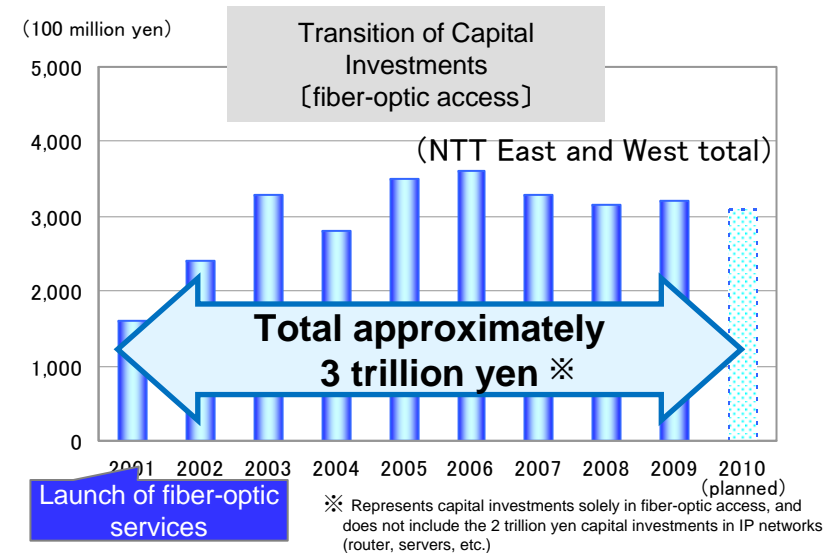
~As a result of facility-based competition, users can choose services according to their needs~

■ Fixed broadband has reached the highest level in the world as a result of facility-based competition

- For both fiber-optic and ADSL
 - **Household Coverage Rate** - highest in the world
 - ~ NTT East and NTT West have invested 3 trillion yen
 - Steady progress in response to the digital divide
 - **Utilization rate** - highest in the world
 - ~ fiber-optic and ADSL users: 28 million
 - **Price** - least expensive in the world
- Expansion of CATV
 - Diverse business models- For cities/towns, joint public-private ventures, etc.
 - **Faster speeds** (30M – 160Mbps are the main service speeds)
 - ~ CATV users: 25 million, of which 5.4 million are broadband users

■ Wireless broadband has also reached the highest level in the world

- 3G coverage has already spread over the entire country, and the utilization rate is the highest in the world
 - ~ NTT DOCOMO has invested over 5 trillion yen into mobile broadband since 2001
 - ~ In December, NTT DOCOMO will launch the LTE service, which is capable of reaching the transmission speeds of fiber-optic cable



World's Most Committed Opening of Networks

■ Most committed opening of the fixed broadband access globally

- Opened up copper lines at world's least expensive charges* *Line sharing
- Pioneer in opening up of fiber-optic lines

■ Fixed core networks are also opened up to service providers

- ISP, ASP and content providers provide services by accessing the NGN and regional IP networks

Discussions will be held if there are requests for the addition of specific services and functions

| | | Japan | U.S. | U.K. | Germany | France | Korea | |
|------------------------------|--------------------|---------------------|------|--|---------|--|-------|-----|
| Unbundling obligation | Copper | Dry copper | Yes | Yes | Yes | Yes | Yes | |
| | | Line sharing | Yes | Yes→ No <small>(Abolished in 2003)</small> | Yes | Yes | Yes | Yes |
| | FTTH | | Yes | Yes→ No <small>(Abolished in 2003)</small> | No | Yes→ No <small>(Abolished in 2005)</small> | No | No* |
| | IP networks | | Yes | No | No | No | No | No |

*Optical cables laid down after 2004 are exempt from unbundling obligations

■ Market shares should be determined by the entire broadband market

- Users select fixed/mobile broadband according to their needs, therefore, market shares should be considered based on the broadband market as a whole (fiber-optic, ADSL, CATV, mobile, WiMAX, etc.) <Perspective of technological neutrality is important>

NTT's share in FTTH is a result of its advance investment and corporate efforts

(area expansion, sales promotion, cost reduction, R&D, etc.)

Maintaining an Environment of Fair Competition

■ Since privatization, measures regulating interconnectivity and activities have accumulated

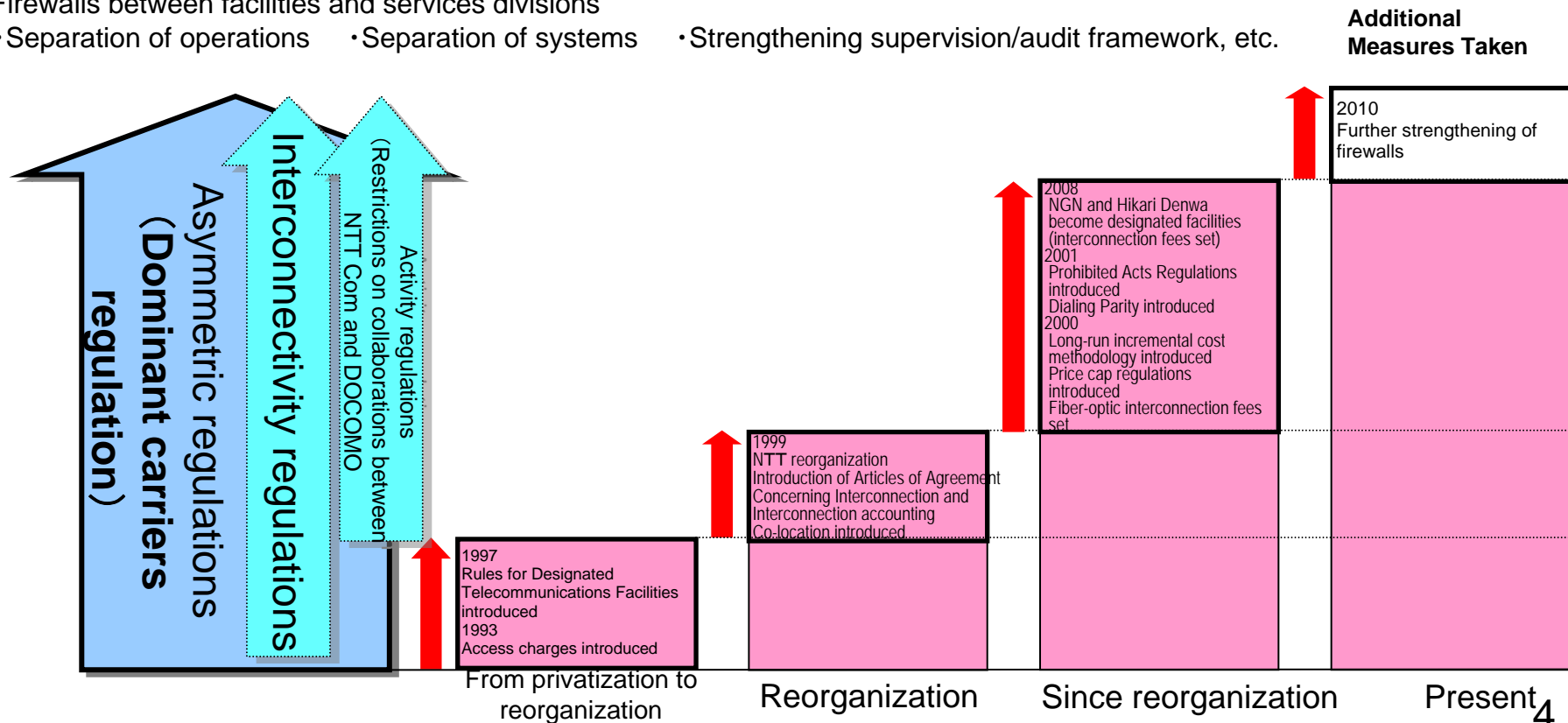
- Rules for Designated Telecommunications Facilities (1997: Interconnection obligation, regulatory pricing [non-discriminatory], etc.)
- Guidelines for Use of Poles, Ducts, Conduits, and similar Facilities. (2001)
- Prohibited Actions for Dominant Carriers Regulations (2001, prohibitions against flexible collaboration between NTT East/NTT West and NTT Communications/NTT DOCOMO)

■ Reorganization – adoption of US-type structural separation of the telephone era

- Spin off of East, West, Com (1999)

■ This time: further strengthening of firewalls

- Firewalls between facilities and services divisions
 - Separation of operations
 - Separation of systems
 - Strengthening supervision/audit framework, etc.



NTT's Continuing Contribution to Broadband Expansion

- Efforts to increase demand through service creation and the use of ICT
- Reduce costs and improve services by promoting R&D

■ Cost reduction and area expansion

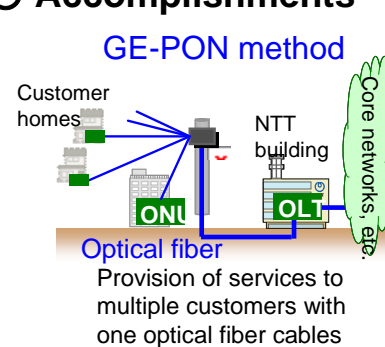
- Improvement in materials and installation methods
- Review of facility design
- Advancement of functions, development of new technologies

■ Improvement of services

- Shortening installation periods
- Improvement in wiring methods
- Enhancement of user support

R&D

○ Accomplishments

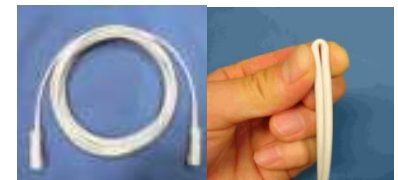


Thin low-friction indoor optical cables



Easy installation of fiber-optic cables through existing pipes with little remaining space

Indoor optical fiber cords (Free bending optical fiber cords)



bendable

○ Future initiatives

Currently researching and developing the extension of transmission distance for fiber-optic cables (OLT/ONU) (Extension of the current 7km to over 20km)

Paradigm shift from telephone era to broadband and IP era

○ Service selection by users (competition)

- Fixed broadband to mobile broadband (No. of broadband users: mobile - 120 million; fixed - 30 million)
- To Internet services in the global market

○ Asymmetric regulations should be revised in order to enable NTT to provide services flexibly and timely, such perspectives as

- • User-friendliness (One-stop source for collaboration and convergence of services, etc.)
 - Investment incentive
- and others is essential