

MPHPT

July 1, 2002, Vol. 13, No. 6

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COMMUNICATIONS NEWS

Biweekly Newsletter of the Ministry of Public Management, Home Affairs, Posts and Telecommunications, Japan

Public Comments Invited on Preliminary Draft of the Final Report of the "Special Department for Desirable Pro-Competitive Policies in the Telecommunications Business Field for Promoting the IT Revolution"

On June 4, 2002, the "Special Department for Desirable Pro-Competitive Policies in the Telecommunications Business Field for Promoting the IT Revolution" of the Telecommunications Council announced the preliminary draft of the final report for inviting public comments thereon.

In response to the inquiry (No. 29 of July 26, 2000) from the Minister of Posts and Telecommunications (then) on "Desirable Pro-Competitive Policies in the Telecommunications Business Field for Promoting the IT Revolution," the Telecommunications Council established the Special Department. It released the first report on December 21, 2000, and the second report on February 13, 2002.

The Special Department will develop the completed draft, taking into consideration public comments and opinions, in order to submit the final report to the Council. Those who want to file comments or opinions on this draft, please send them via e-mail, facsimile or conventional mail by July 2, 2002.

The outline of the preliminary draft of the final report is as follows:

new entries into the fiber-optic access services by new carriers, includ-

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Outline of the Final Report (Preliminary Draft) on Desirable Pro-Competitive Policies in the Telecommunications Business Field for Promoting the IT Revolution

(Tentative Translation)

Chapter 1. Basic Concept Concerning Desirable Pro-Competitive Policies in the Future

1. Current Market Trends in the Telecommunications Business Field

- (1) Taking into account remarkable technological innovations in the information-communications field in recent years,

the stream of broadband has been accelerating as exemplified by the shift from conventional networks tailored for each service toward high-speed, large-capacity access networks (always available) commonly based on Internet Protocols.

- (2) In specific terms, a sharp rise in the number of subscribers to DSL services (34-fold increase over one year);

International Policy Division,
International Affairs Department,
Ministry of Public Management, Home
Affairs, Posts and Telecommunications
1-2, Kasumigaseki 2-chome,
Chiyoda-ku, Tokyo 100-8926, Japan

• We welcome your comments by:
feedback-newsletter@soumu.go.jp
Fax: +81-3-5253-5924
Tel.: +81-3-5253-5920

• MPHPT information is available at:
<http://www.joho.soumu.go.jp/eng/>

ing power utility companies (themselves); and many new entries of IP telephony providers.

- (3) In addition, with respect to the mobile communications field, the launch of the third-generation (3G) mobile telecommunications system; PHS service which provides flat-rate data communications service, new services through wireless LANs and so on.
- (4) Along with the development of IP and broadband, the vertical-integration business model, etc. covering multiple business fields has emerged. Moreover, in business domains on the fringe of the telecommunications services, new business such as CDN (Content Delivery Network) and iDC (internet Data Center) are already about to be diffused.
- (5) It is necessary to investigate, from the point of view of maximizing user benefit, the desirable pro-competitive environment, flexibly matching such environmental changes as the development of IP, broadband and so on.

2. Trends in New Pro-competitive Policies in Major Countries

- (1) In the U.S., as to the pro-competitive policies in the broadband age the Federal Communications Commission (FCC) has been considering whether to maintain pro-competitive policies through the market mechanism or to switch to a policy that places priority on encouraging industry. FCC recognizes that the broadband service market needs to be defined and an assessment made as to whether or not incumbent local exchange carriers (ILECs) have the significant market power in that market. Careful monitoring of these deliberations is required.
- (2) In April, 2002, the EU adopted the New Directive (2002/21/EC) on a Common Regulatory Framework for electronic communications networks and services within the EU territories (by July 24, 2003, all Member States of the EU must adopt national legislation implementing those new Directives). Under the Directive, in order to minimize the regulatory levels, definition of markets, including the broadband market, are given priority, so as to clarify applicable regulatory frameworks.

3. Basic Concept Concerning Desirable Pro-competitive Policies in the Future

- (1) Firstly, it is important to further promote new entries into the market and to ensure that a fair and competitive environment is in place. Specifically, it is necessary to open the bottleneck facilities further and to stimulate both facilities competition and service competition through promotion of aggressive new entries.
- (2) Secondly, it is essential to bolster consumer protection through administration procedures. In other words, it is vital not only to maximize user benefits by promoting competition, but also to promptly formulate specific measures to create an environment wherein users can independently make a reasonable choice from diversified and complicated services.
- (3) Thirdly, it is necessary to examine measures that need to be taken to introduce new pro-competitive frameworks to suit the IP age. It is essential to conduct fundamental reviews on the competitive framework itself including the business categorization, considering the fact that the network and market structures have been changing along with the development of IP and broadband, and that the present business categorization does not necessarily mesh with the reality of competition among carriers.

Chapter 2. Active Implementation of Pro-Competitive Policies

1. Promotion of New Entries

- (1) It is vital to stimulate competition in both facilities and services through further promotion of new entries and emergence of the diversified "competitive axis."
- (2) In order to stimulate the facilities-based competition by promoting new entries, it is necessary to prepare an environment tailored to further diversification of local loops and trunk networks regardless of wired/wireless or fixed/mobile networks. In addition, it is vital to promote service competition by opening functions of access networks, etc.

2. Promotion of Pro-competitive Policies to Open up Networks

2-1. Resale for PSTN

- (1) To identify and organize such items as: subject resale services; matters pertaining to contracts; necessary activities for a resale carrier; opening of the operation support system (OSS) enabling necessary activities for the resale carrier; and major prerequisites for the system development.
- (2) Based on the abovementioned organization, the result of NTT East/NTT West's pro forma calculation of the costs pertaining to the system development is about 84 billion yen. However, the estimates of the development cost in various cases, e.g., under certain conditions excluding the MYLINE (dialing parity) function, the NTT East/NTT West's estimates are about 40 billion yen. The time period necessary to develop the system is 2 to 3 years.
- (3) The discount rate ranges from 17.6% to 27.0% according to the estimate wherein the sales cost that is not included in the resale cost is excluded from the total cost. In practice, however, the costs pertaining to the system development/operation are to be added the estimate.
- (4) Thus, carriers who wish to start the resale business shall request NTT East and NTT West for the resale based on their own business judgment by taking into account the abovementioned factors, and shall negotiate with the parties concerned. When NTT East or NTT West declines to participate in the negotiation, the carriers may request the administration to issue an order to start such negotiations. In this case, the administration shall make a decision by taking into account the merits of the resale for PSTN and the rapid changes in the environment surrounding telephone services.

2-2. Relationship between Interconnection Charges and User Charges

- (1) In order to make the interconnection charges more reasonable, it is appropriate to examine the relationship between the interconnection charges and user charges upon authorization for the interconnection charges. The same examination shall be conducted in cases where a competitor, etc. submits complaints or opinions or where the relationship between interconnection charges and user charges is

- deemed to be unreasonable after notification of user charges is received.
- (2) Internet-related services, in particular, DSL services, etc. shall be appropriate as a subject for the examination.
 - (3) When the relationship between the interconnection charges and the user charges is inappropriate, it shall be deemed adequate to reduce the interconnection charges in principle. In addition, upon examination, the current status of the price competition in the market and trends in the market shares of NTT East and NTT West shall be taken into account.

2-3. Access to OSS

- (1) With respect to access to the OSS (Operation Support System), the issues to be discussed in depth are i) an automatic notification system of the conformity confirmation result, ii) automatic notification of names of services not to be shared with DSL services, iii) automatic notification of telephone subscribers' information [i, ii) and iii) above are for DSL services], iv) disclosure of detailed information on the schedule of inter-office transmission optical line facilities construction, v) disclosure of information on the number of inter-office transmission optical line facilities unable to be interconnected, vi) disclosure of information on a specific plan such as floor expansion of buildings [iv, v) and vi) above are for interoffice transmission optical line facilities], vii) disclosure of information on the approximate period required for interconnection, viii) disclosure of information on the different route, and ix) disclosure of information on the arrangements and progress of the construction work of local optical line facilities [vii, viii) and ix) above are for the local optical line facilities].
- (2) The methods of cost sharing among carriers including NTT East and NTT West shall be in accordance with the benefit principle as a general rule.
- (3) With respect to the disclosure of telephone subscribers' information and personal information protection, NTT East and NTT West shall stipulate in the tariffs that they may disclose telephone subscribers' information to carriers interconnected, and make said tariffs public. However, in cases

where a telephone subscriber clearly stipulates that he or she does not want proprietary information to be disclosed NTT East and NTT West shall ensure that measures are taken to prevent the disclosure of such information.

3. Measures to Deal with Structural Issues

- (1) It is important to flexibly deal with changes in the market, monitoring i) the implementation situations of fair competition promotion measures including the preparation of the asymmetrical regulation, etc., ii) the implementation situation and the results of the coming competition rules, iii) whether firewall measures are observed by NTT East and NTT West since reorganization; at the same time, watching the progress in competition in the local telecommunications markets from various aspects.
- (2) In addition, with regard to structural-separation pro-competitive policies (structural separation of wholesale/retail units held by NTT East and NTT West), careful deliberations thereon shall be continued, taking into account of the merits/demerits and trends in foreign countries.

Chapter 3. Improvement of Consumer Protection Administration

1. Significance of Consumer Support Measures and Current Status Thereof

- (1) In order to maximize consumer benefits through the very significant expansion of service availability for users derived from development of competition in the telecommunications market, consumers are encouraged to make a rational choice by eliminating information asymmetry against telecommunications carriers, at the same time, an appropriate safety net should be prepared that immediately remedies troubles involving consumers.
- (2) At present, along with the widespread deployment of advanced and diversified telecommunications services among Japanese people, troubles involving consumers concerning Internet-related services, etc. are increasing. The number of consultations and complaints filed with MPHPT,

the National Consumers Affairs Center of Japan and other related organizations is also increasing.

- (3) To this end, comprehensive consumer support measures in the telecommunications field shall be strengthened. MPHPT shall i) formulate comprehensive policies for consumer support, ii) introduce and apply necessary institutional frameworks, and iii) make collaborative efforts with the relevant ministries and organizations. Telecommunications carriers shall promote appropriate approaches in establishing a consumer support system and adopt strengthened measures.

2. Specific Measures to Strengthen Consumer Support

- (1) One priority that needs to be addressed is the development of capable persons able to help consumers make an rational choice concerning a variety of rapidly changing telecommunications services, and give consumers advice that contributes to solving troubles concerning telecommunications. To this end, MPHPT, telecommunications carriers, etc. shall cooperate with the National Consumers Affairs Center of Japan or local governments to foster expertise for them on telecommunications consultants, etc. who provide counselling for consumers. In addition, in order to promote widespread use of IT by Japanese people, introduction of a system to certify "communications service planners" by the private sector will be useful; thus, a conference consisting of interested parties to deliberate upon the practical system shall be established.
- (2) In order to promote the diffusion of information that helps consumers in choosing telecom activities, telecommunications carriers and telecommunications carriers associations shall develop industrial self-regulation guidelines containing items to be informed to consumers of new services that are deemed to have a social impact, in particular best-effort type services. As for MPHPT, there is a need to improve the provision of information to consumers via its website, etc., such as a portal site function to provide a variety of IT information. Furthermore, upon conclusion of a contract pertaining to telecommunications services, appropriate

frameworks that ensure explanation of important items, etc. to consumers shall be studied further.

- (3) In order to activate consumer counselling procedures, with regard to the submission system of complaints/opinions and dispute-settlement systems as provided for under the Telecommunications Business Law, there is a need to promote effective use of those systems and ensure transparency thereof, such as publication of dispute resolution manuals by MPHPT. It is essential to strengthen collaboration among relevant organizations through establishment of a liaison committee on a regular and on-going basis consisting of MPHPT, the National Consumers Affairs Center of Japan, telecommunications carriers, consumer groups, etc. In addition, there is a need to conduct a study by the government and telecommunications carrier associations on the establishment of a counselling unit to accept complaints and consultations on telecommunications; in this case, step ahead measures such as ADR (alternative dispute resolution: i.e., mediation, arbitration, etc.) functions shall be put in perspective.
- (4) Where flexible regulatory frameworks are introduced, with respect to consumer support measures in the telecommunications field, industrial voluntary efforts to support consumers shall be strengthened based on the concept of compliance practice. To this end, industrial self-regulation guidelines shall be developed by telecommunications carriers, in collaboration with telecommunications carriers associations and the administration.

Chapter 4. Direction of New Competition Frameworks

1. Changes in Market Environment and Necessity of Reviewing Competition Frameworks

- (1) The present categorization of Type I and Type II telecommunications businesses has been a basic structure of competition frameworks in the telecommunications business field. This categorization based on a clear standard has effectively promoted competition to date.
- (2) However, corresponding to the recent changes in market structures and

network structures brought about by the development of IP and broadband and the emergence of new business models, the time is ripe to comprehensively review the present competition frameworks.

2. Basic Viewpoints Related to Review of Competition Frameworks

Upon examination of new competition frameworks in the telecommunications business field, the following three points shall be recognized as basic viewpoints:

- (1) Lowering the overall level of regulation in order to encourage competition through the emergence of diversified business models, freely combining a variety of networks and services;
- (2) Creating systems for supplementing market mechanisms from the viewpoint of ensuring fair competition and protecting consumers (business model neutrality and technological neutrality are necessary); and
- (3) Ensuring due process and transparency.

3. Desirable New Competition Frameworks

- (1) With regard to desirable new competition frameworks, it is necessary to examine the fundamental regulatory frameworks, such as entry/exit regulations and public utility privilege (namely, rights-of-way; "ROW" hereinafter) directly linked with the entry regulations; at the same time, other existing systems (regulations on services for end users, interconnection rules, ensuring universal service, telecommunications number, technical standards, essential communications, etc.) shall be comprehensively and systematically examined.
- (2) Regarding the entry regulations, the present Type I and Type II business categories shall be abolished, and the entry regulations shall be drastically relaxed (abolition of permission system pertaining to Type I business). Further studies including legislation are necessary to fix the entry regulation systems (enabling business entry by registration or notification), considering that measures to ensure fair competition and protection of consumers shall be taken prior to the new entry when necessary.
- (3) However, the General Type II business may be started only by notifica-

tion under the present system. Even under new regulatory frameworks, special treatment shall be given to carriers with a negligible social impact, for example, enabling such carriers to enter only by notification.

- (4) As for ROW, in order to facilitate smooth deployment of network infrastructure by telecommunications carriers, it is necessary to remain the system of granting the right. In specific, further studies shall be made on the introduction of a new scheme to grant ROW based on application from carriers after examination of business plans by amending the present systems where ROW is directly linked with the entry regulations, taking into consideration consistency with other laws and regulations.
- (5) With respect to market exit regulations, permission for changes of business, and transfer/takeover, merger/break-up, inheritance of business operations, it is appropriate to shift from the present permission/authorization systems to notification systems. However, along with the shift of the market exit regulations to prior notification systems, obligation of prior announcement to users on market exit shall be studied.
- (6) With regard to not-for-profit telecommunications business (e.g., run by local public entities, etc.), there is a need to study on imposing minimal regulations such as ensuring of secrecy of communications and conformity with technical standards.

4. Matters to Be Studied in Line with Shift to New Frameworks

- (1) In line with abolition of Type I and Type II businesses categories, the entire structure of the Telecommunications Business Law shall be reviewed. In particular, as for services for end users, regulatory frameworks shall in principle be considered separately from networks, so that each carrier can flexibly offer services.
- (2) Specifically, it is appropriate that in principle obligation to establish charges/tariffs for providing services shall be lifted and contracts are to be concluded through negotiations between parties concerned. However, from the viewpoint of consumer protection, mechanisms for ensuring sufficient provision of information to users on contract, and issuing orders

to improve business activities or to change charges shall be required.

- (3) In addition, with regard to dominant carriers with market power, obligations shall be imposed, to establish charges/tariffs of the services where said carriers are assumed to have market power, and to provide said services based on said charges/tariffs. However, contracts pertaining to said services based on negotiations are also to be allowed. Furthermore, in order to open up platform functions such as authentication and charging inseparable from said services, necessary measures shall be studied.
- (4) It is necessary to define each appropriate sub-market, taking into consideration features and substitutability of each service in end user service markets, and to evaluate market powers in said sub-market. As for desirable scheme of regular effective competition review (market analysis), a specialist panel shall be established for detailed study. In addition, the regulatory authority shall be empowered with strengthened and improved market monitoring functions.
- (5) With respect to interconnection rules, rules focusing on bottleneck facilities indispensable for other carriers to interconnect are still essential. However, the coverage and regulatory

measures on designated facilities shall, if necessary, be reviewed based on the progress of competition in the market.

- (6) With regard to ensuring of the universal service, assignment of telecommunications numbers, conformity with technical standards, ensuring of essential communications, etc., desirable regulatory frameworks for maintaining and ensuring those schemes shall be studied further. The technical standards shall be reviewed comprehensively, fully taking into account the diffusion of best-effort type services.

Chapter 5. Toward Development of New Pro-Competitive Policies

- (1) It is desirable to construct new regulatory frameworks where the present Type I and Type II businesses categories are abolished so that carriers can freely deploy their business and problems in light of fair competition and consumer protection can be immediately eliminated.
- (2) To this end, the government shall start i) drafting a necessary bill to amend relevant laws concerning new competition frameworks right away, and ii) studying more concrete measures of effective competition review, new methods for assigning telecommunications numbers, comprehensive review of the technical standards, etc.
- (3) It is necessary to improve consumer protection administration as combined policies with pro-competitive policies. Thus, the establishment of a conference concerning a qualification system for supporting consumers, the development of industrial self-regulation guidelines by telecommunications carriers associations, etc. shall be studied without delay.
- (4) The highest strategic priority shall be given to the development of the telecommunications market in order to promote Japan's structural reform and improve its international competitiveness. In addition to the radical transformation of the abovementioned pro-competitive policies, there is a need to develop new comprehensive IP policies from multifaceted perspectives including i) promotion of R&D including realization of a ubiquitous environment, ii) promotion of widespread deployment of broadband platforms without uneven distribution, and iii) tie-up and collaboration for enhancing international competitiveness among the government, academia and industry, etc.

“Study Group on New Business Models and Grand Design of Competitive Environments for the New Information and Communications Era” Releases Final Report

MPHPT has been holding the “Study Group on New Business Models and the Grand Design of Competitive Environments for the New Information and Communications Era” (Chair: Mr. HAMADA Junichi, Professor, Interfaculty Initiative in Information Studies, and Graduate School of Interdisciplinary Information Studies, University of Tokyo) since August 2001. The study group has deliberated on the competitive environments for the telecommunication business field in preparation of the broadband age. At the 17th meeting, the study group has compiled its outcomes as a final report, “How Competitive En-

vironments in the Telecommunications Business Field Should Be Established in the Broadband Age.” The study group released an interim report in January 2002, invited public comments in March 2002 on the development of IP networks in the telecommunications field for a period of one month, and announced its final report (draft) by taking into consideration the public opinions and ideas.

The final report is based on opinions and ideas drawn from all related quarters.

The outline of the final report is as follows:

(3) In planning how to establish rules for competition, a look at a variety of actions that can foster competition, such as those below, is required in addition to giving priorities to “ensuring the transparency and predictability of the system,” “establishment of rules that promote competition” and “ensuring due process.”

- 1) Implementing regular reviews of effective competition
- 2) Creating close interaction between the dispute resolution process among carriers and establishing the rules for competition
- 3) Establishing guidelines for competition
- 4) Creating close interaction between the Telecommunications Business Law and the Antimonopoly Act
- 5) Valuing the importance of user protection

Final Report: How Competitive Environments in the Telecommunications Business Field Should Be Established in the Broadband Age

(Summary)

Chapter 1 . The basic perspective on competition policies in the future

Necessity of competition policies for the broadband age

(1) Considering how competition policies in the telecommunications business field should be in the future, it is necessary to accelerate the stream of broadband and to establish an environment in which fair competition enables a variety of business models to emerge through lively competition. It is especially necessary to examine this in light of the changes in the network and market structures brought about by the move to broadband.

The basic perspective of layer-focused competition policies

(2) Due to the progress in unbundling the functionality of all of the layers that accompanied the development of broadband communications, business models have emerged such as the “open access” business model that provides services by freely combining what is required for each layer, and as new business models within the higher layers (e.g., the iDC (internet Data Center) business). It is necessary to examine the approach for both inter-layer fair competition environments and intra-layer fair competition environments.

Basic approach to establishing rules for competition

Chapter 2. Inter-layer business models and competitive environments

Assessment of inter-layer business models

(1) One characteristic of inter-layer business models that has been emerging recently is that in addition to the “vertically-integrated single model,” there is also now a “joint model.” In a “single model,” individual carriers develop their own independent businesses, such as mobile communications carriers. In a “joint model,” multiple companies join together, with each contributing its business resources to its own particular layer and combining all of the parts in order to form an “open-access” business model. As a result, compared with what has been the case in the

past, it is expected to see market competition stimulated by more carrier groups (competition axes) will emerge.

Inter-layer business models developed by dominant carriers

(2) Among inter-layer business models developed by dominant carriers

1) For NTT East/NTT West (whose scope of business activities is restricted by the NTT Law to the regional telecommunications business, but who can, with the authorization of the Minister of Public Management, Home Affairs, Posts and Telecommunications under specific conditions, expand its scope of business activities to the upper-level layers across prefectural boundaries), it is necessary to review each case carefully to determine if fair competition requirements are satisfied or not, according to the "Guideline for authorization on NTT East/NTT West expanding their business activities," which was drawn up and publicly announced in December 2001.

Further, from the viewpoint of achieving the smooth distribution of content, the provision of open access to the platform layer where authentication/billing, etc. are performed is an extremely important element, and if NTT East/NTT West enter platform layer business, it may also be necessary to examine the necessity, etc. of unbundling of platform-business-related functions (those recognized as indispensable elements for provision of similar services by other carriers).

2) With respect to NTT East/NTT West subsidiaries advancing into higher-level layers, in general, it cannot be said that this is an indiscriminate loss of fair competition, but there are fears that in reality this has the same effect as NTT East/NTT West itself advancing into the higher-level layers. If, after this situation has been adequately examined, it is determined that structural problems are occurring, or that there is a substantial risk of their occurring, with respect to fair com-

petition, it may be necessary to examine whether to take new measures, including enhancing the scope of "specific related companies" (currently limited to telecommunications carriers) within asymmetrical regulations (regulations for dominant carriers) and, with reference to the situation in other countries, whether to introduce the concept of group dominance, if necessary.

Inter-layer businesses models developed by mobile communications carriers

(3) In the mobile Internet field, each group is working on measures that will open their networks, such as "opening gateways for ISPs (Internet Service Providers)," "ensuring the transparency of procedures for adopting content on their official portal sites" and "ensuring the equal-footing basis in selection of portal sites by users," and it is necessary to continue to carefully watch how they handle these issues from now on.

(4) As for ensuring the transparency of procedures for adopting content on their official portal sites, a proposed idea by one group to enhance authentication and billing services to unofficial sites as well is highly evaluated. Thus, further proceedings for specific discussions on it at other groups and for preparation of a new specific proposal is expected. Further, under the situation of opening gateways for ISPs is in progress, ensuring the equal-footing basis in selection of portal sites by users will become a more important issue than ever before. It is expected that telecommunications carriers discuss and manage this positively.

(5) In the mobile communications field, in light of the fact that telecommunications carriers are in an overwhelmingly superior position compared to content providers, etc., it is effective to make "prohibited practices constituting problems under the Telecommunications Business Law," pertaining to transactions between mobile communications carriers and content providers, to the extent necessary, more specific, upon the review (within CY2002) of the "Guidelines for Promotion of Competition in the Telecommunications Business

Field" (competition guidelines) formulated and publicly announced in November 2001.

Chapter 3 . How competitive environments should be established within each layer

How competitive environments should be established within the network layer

(1) To stimulate competition in local telecommunications markets through the diversification of subscriber local loops, it shall be necessary to promote further the following items set forth in the interim report:

- 1) Diversification of wireless access networks (creating high-speed Internet access environments using wireless LANs in locations expected to be "hot spots," such as airports and train stations, etc.)
- 2) Diversification of fixed access networks (smoothing the achievement of a broadband environment in apartment buildings, achieving high-speed telecommunications services through the use of existing metallic lines (for example, VDSL (Very high-bit-rate Digital Subscriber Line)), etc.)
- 3) Immediate achievement of the resale of public switched networks (now under consideration at the council composed of telecommunications carriers, etc.; to be compiled in the draft final report of the Telecommunications Council in June 2002)
- 4) Promotion of smoother exercise of rights-of-way (MPHPT reviewed the "Guideline for Use of Utility Poles, Ducts, Conduits, Etc. in the Telecommunications Field" in April 2002; the progress in use of facilities will be deliberated every April and be reviewed based on the results.)
- 5) Periodical review of access network bottlenecks (related to "effective competition review" in Chapter 4)
- 6) Achievement of more diverse and lower fees and services

(2) As for diversifying trunk line networks, it shall be necessary to promote further the following items set forth in the interim report:

- 1) Cultivate wholesale markets

based on the emergence of bandwidth trading/intermediation businesses

- 2) Promote less costly backbone lines (measures for simplifying licensing procedures pertaining to specialized carriers only in providing wholesale telecommunications services were already taken; meanwhile, establishing local Internet-eXchanges (IXs) integrated with data centers, etc. is to be promoted.)
- 3) Make effective use of fiber-optic networks owned by those other than telecommunications carriers (with respect to the formulation of the "Standard Procedures for Providing Fiber-Optic Networks to Telecommunications Carriers (tentative name)" targeted to local governments, etc. set forth in the interim report, shall be formulated and released publicly by MPHPT within FY2002)
- (3) As for the network resale markets, for example, in the mobile communications market where the number of licensed carriers is limited due to availability of frequencies, from the perspective of stimulating markets through the introduction of MVNOs (Mobile Virtual Network Operators) with a variety of business models, in order to make MVNO-related administration more transparent and foreseeable, the preparation and official announcement of "Guidelines for Becoming an MVNO (tentative name)" was stated in the interim report (based on the interim report, MPHPT will prepare the "Guideline Concerning Application of the Telecommunications Business Law and the Radio Law Pertaining to MVNO" by around May 2002). As for MNOs (Mobile Network Operators), the existing mobile telecommunications carriers, it is not appropriate to impose on MNOs obligation to resell services to MVNOs, at least at the present time, taking into consideration fears that motivation to invest in telecommunications facilities by MNOs will decline.

How competitive environments should be established within the platform and other layers

- (4) As a way of establishing an environment conducive to smooth content

delivery, it is appropriate for standardization organizations to begin examination quickly to reach a conclusion concerning self-regulation (self-authentication) standards for a best effort model of Internet service quality (for example, deciding on a standard network model, setting objective benchmark values or fixed range values, and presenting users with classes of service quality) was set forth in the interim report (based on the interim report, MPHPT will carry out the research and development such as a transmission speed estimator for DSL services, necessary for quality evaluation, while continuing domestic studies on standardization of the quality assessment by taking into account study trends on the quality of IP networks, etc. at ITU.).

How competitive environments should be established within the terminal layer

- (5) In the mobile communications field, a vertical integration business model has been adopted whereby terminal sales and telecommunications services (users' choice of telecommunications carriers) are bundled (integrated), prices for terminal equipment are set lower than costs, and losses from terminal equipment are recovered from telecommunications charges.
- (6) However, along with the introduction of next-generation cellular phones (3G), new capabilities are coming into view, such as releasing locks on UIM (User Identity Module) cards, which makes it possible to unbundle terminal sales and telecommunications services, using these same cards as new electronic authentication cards, as well as the realization of number portability in the mobile communications field. To examine these in an integrated manner, the interim report proposed that it is appropriate to organize a group where manufacturers, telecommunications carriers, and administrative authorities can consult with each other (based on the interim report, during FY2002, MPHPT will organize a study group including telecommunications carriers, terminal vendors, etc. to discuss issues such as specific methods, practical measures and their cost estimation with introduction, etc. related to

the realization of mobile phone number portability and releasing locks on UIM cards).

Chapter 4 . How competitive environments should be established to meet widespread introduction of IP

Basic approach

- (1) It is predicted that IP-based services business markets will grow quickly due to the widespread introduction of IP along with dissemination of broadband networks. Accordingly, it is necessary to study the impact of the widespread introduction of IP on the network structures and market structures, and influences of these changes on the establishment of the competitive environments.

Change of the network structure from the circuit switched network to the IP-based network

- (2) **With respect to changes in the network structure, it is appropriate to classify those changes into access networks and trunk line/backbone networks:**
 - 1) As for access networks, it is considered that demands for more convenient IP-based integrated services will increase according to the shift from existing asymmetric (downstream only) broadband networks to symmetric (downstream and upstream) broadband networks due to diffusion of P2P (peer-to-peer) communications, online storage services, distributed computing (grid computing), digital collaboration environments, etc. In this case, as for general users, a large portion of them may still use circuit switched network-base services until technical problems associated with IP telephony services (eg., communication between different protocols) are solved. Thus, regardless of an acceleration of IP technology introduction, circuit switched networks and IP-based networks will continue to coexist for a while. On the other hand, as for corporate users, introduction of full- IP services will be accelerated in both trunk line and access networks.
 - 2) As for trunk line/backbone net-

works, IP will be introduced widely due to the network construction of IP-VPNs and wide-area Ethernet, etc. In this case, a hierarchical structure may still remain as a network structure.

Change of the market structure due to progress of IP-based network construction

(3) Due to progress of IP network construction:

- 1) Firstly, integrated services will be diffused, such as introduction of services integrating voice, images and data, and the realization of a ubiquitous environment, etc. through seamless services regardless of fixed or mobile telecommunications.
- 2) Secondly, many new business models will be introduced to the markets based on new telecommunications features such as flat-rate tariffs by transmission capacity or transmission speed along with an expansion of web services (market expansion of B2B and B2E (employee)) due to the diffusion of P2P or machine-to-machine communications.
- 3) Thirdly, competition among telecommunications carriers will come into a new stage. That is, new entries into the market will become easier due to the progress of IP introduction. With regard to facilities-based existing telecommunications carriers, their investments will be concentrated on IP-related facilities rather than circuit switched facilities. Taking into account the decrease in profitability derived from the progress of IP introduction, it is strategically crucial for existing telecommunications carriers to facilitate the effective expansion of the scope of business from the conventional services to the vertical integration business model including upper-level layers and the solution business. Under such circumstances, it is vital to study necessary policy supports such as tax incentives and public loan programs in order to encourage the introduction of IP.

How competitive environments should be established to meet the progress of

IP network construction.

- (4) The progress of IP introduction will bring about acceleration of widespread use of integrated services, facilitation of market entries into the telecommunications business, emergence of new business models, etc. It may bring about changes to profit structures and business models of existing telecommunications carriers, thereby it may cause drastic changes of telecommunications market structures. Therefore, in the case of study on how competitive environments should be established, it is essential to discuss frameworks to meet such circumstances by taking into account the prediction of a substantially matured stage of IP introduction.
- (5) With respect to the pro-competitive policy for meeting the widespread use of IP in the telecommunications business field, it is crucial and effective to promote the competition in both infrastructures and services. To this end, it is essential to study them based on three basic approaches ensuring: i) neutrality in the competition; ii) technical neutrality; and iii) access to the broadband without regional omnipresence. Specifically, the following matters shall be studied:
 - 1) Firstly, with respect to the revision of regulatory levels of the applicable regulations by market, it shall be necessary to examine the possibility of market substitution, the current status of competition for infrastructure and service markets as well as the inter-market relationship between these (related to the recognition of market dominance), in addition to the impact of the vertical integration business model through periodical implementation of effective competition reviews. For this purpose, through the establishment of another study group, it is appropriate to positively work on the development of analytical methods and to conduct effective competition review targeting the Internet access market, etc. on a trial basis within FY2002.
 - 2) Secondly, it is vital to flexibly review functions subjected to opening (unbundling) up of the plat-

form layer owned by dominant telecommunications carriers in particular under the circumstance of ongoing IP introduction.

- 3) Thirdly, it is essential to discuss the revision of the service classification in connection with the revision of business classification in the telecommunications business, desirable tariff regulation systems, technical standards, etc., with the advent of integrated services handling voice, data and images.
- 4) Fourthly, where there are matters to be added to the Rules for Interconnection, it is necessary to take a prompt action, since the expansion of interconnection forms such as transit and peering, transition to multi-stage interconnection forms, the increased ratio of flat-rate access charges, etc. are envisaged to take place in the progress of IP introduction.
- 5) Moreover, it is essential to discuss the revision of technical standards to meet the progress of IP introduction (required to implement comprehensive review of technical standards, etc.), ensuring universal services (study on a concept of introduction of "the universal access" in the future), ensuring international consistency pertaining to regulatory frameworks for competition, etc.

Chapter 5. Themes in the future

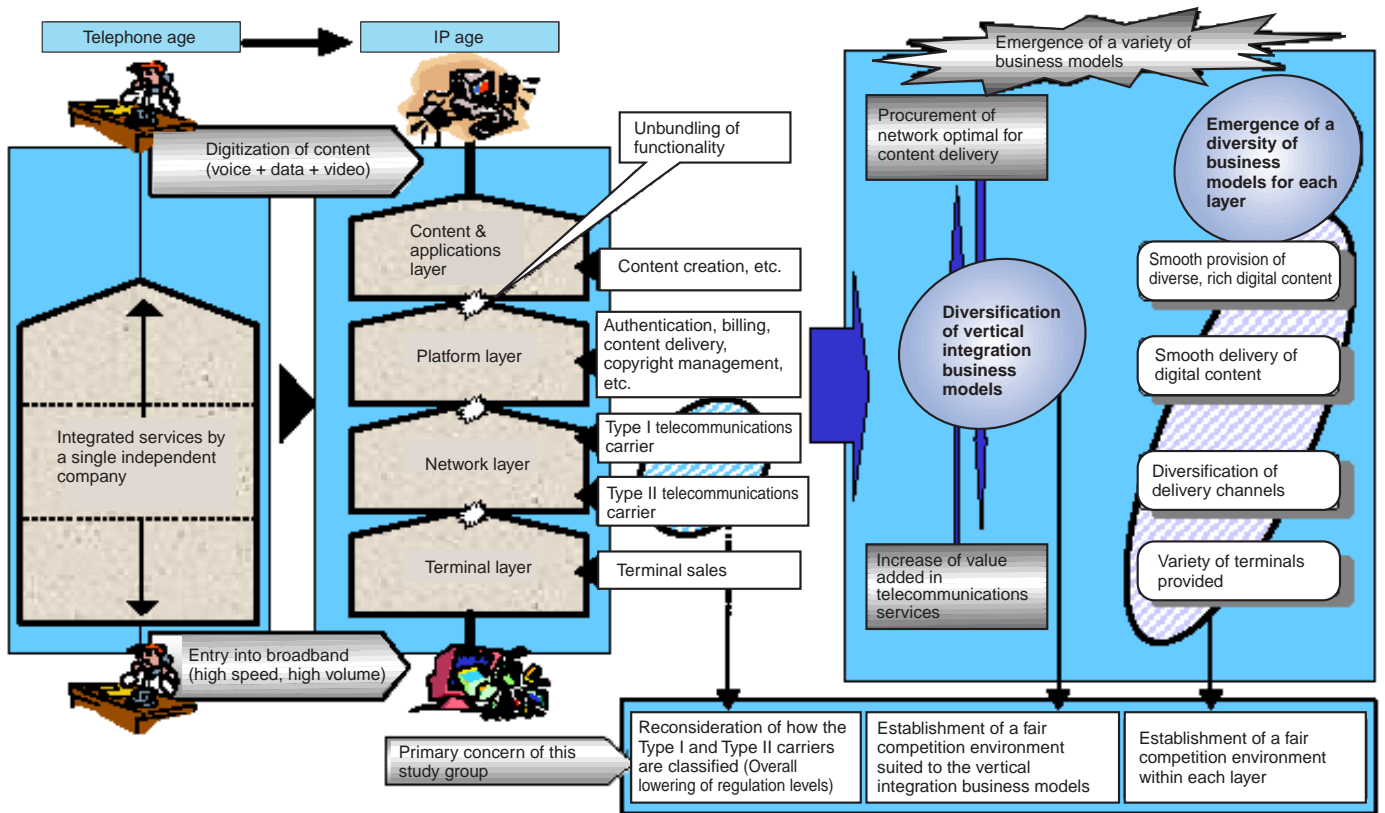
- (1) With respect to the desirable pro-competitive policies for broadband networks in the telecommunications field, this final report studied the issues based on the following three points of views:
 - 1) The viewpoint that it is necessary to study a variety of new business models and to establish competitive environments enabling these business models to develop without any restriction.
 - 2) The viewpoint that it is vital to promote establishment of environments for the fair competition for both inter-layer business models and various business models in each layer by setting the layers as a basis of deliberations.

- 3) The viewpoint, including mid-term perspectives, that it is essential to continuously review competition rules, along with widespread deployment of broadband IP-based platforms, in response to changes in network and market structures.
- (2) In addition to efforts for steadily pro-

moting the “new pro-competitive policy menu for the broadband age” proposed in the interim report, it is requested that integrated and comprehensive IP policy be studied by organizing and examining various aspects of the wide-ranging IP-related policies including i) forecasting future trends in the network structure

to meet the widespread introduction of IP, ii) forecasting trends in IP-related technologies and services, iii) promoting R&D to meet these technological trends and user supports to meet these service trends, and iv) offering public supports for the smooth dissemination of IP.

Basic view of layer-focused competition policies



“Study Group on Future Prospects of Ubiquitous Network Technology” Compiles Report

-- Toward realization of a “ubiquitous network” --

Toward realization of a “ubiquitous network society” in which diversified access to networks and high-capacity applications are enabled, MPHPT had been holding a “Study Group on Future Prospects of Ubiquitous Network Technology” (Chair: Dr. SAITO Tadao, Professor Emeritus, the University of Tokyo) for studying comprehensive R&D promotion measures concerning ubiquitous network technology since November 2001. Recently, the study group compiled its findings as a report.

As networks develop toward higher

speed and diversified access methods to networks are enabled, the advent of the “ubiquitous network society,” in which high-capacity applications are used, is expected. In Europe and the U.S., industrial, academic and government groups have been promoting various R&D projects concerning network technology. In order to ensure Japan’s international competitiveness and to promote strategic R&D under such circumstances, it has become necessary to study comprehensive R&D promotion measures with prospects on the ubiquitous

network age at the earliest date.

Against these backdrops, this report clarifies a socioeconomic image of the ubiquitous network technology and the technology’s impacts, proposes R&D themes to be tackled and promotion measures for the realization.

MPHPT will, paying due respect to this report, promote R&D and standardization activities toward the realization of a “ubiquitous network” at an early stage.

