

Summary of Minutes of the Third Round Table Conference on the Neutrality of Networks

1 Date and time: January 24 (Wed), 2007, 10:30 to 13:00

2 Location: Special Conference Room No.3, Ministry of Internal Affairs and Communications

3 Attendees:

(1) Members (Honorifics omitted)

Takanori Ida, Hiroshi Esaki, Kiyohisa Ohta, Yoshinori Sakai (Deputy Chairman), Minoru Sugaya, Nobuko Takahashi, Motohiro Tsuchiya, Toshihiko Hayashi (Chairman), Masayuki Funada, Toshihiro Matsumura, Hiroyuki Morikawa

(2) Observers

ACCESS Co., Ltd.; Apple Inc.; Internet Initiative Japan Inc. (IIJ); Intec NetCore Inc.; Intel Corporation; INFOCITY, Inc.; GOURMET NAVIGATOR INC.; KDDI Corporation; J-Stream Inc.; SOFTBANK TELECOM Corp.; D4DR Inc.; TELECOM SERVICES ASSOCIATION; Japan Internet Providers Association (JAIPA); Nippon Telegraph and Telephone Corporation (NTT); Institute for Hyper Network Society; Fujitsu Limited; Microsoft Corporation; Mobile Content Forum (MCF); Yahoo Japan Corporation; USEN Corporation

(3) Ministry of Internal Affairs and Communications

Sakurai (Director-General of the Telecommunications Business Department), Taniwaki (Director of the Tariff Division), Ninomiya (Senior Planning Officer of the Tariff Division), Samura (Director of the General Affairs Division), Suzuki (Director of the Telecommunications Policy Division), Ohashi (Director of the Computer Communications Division), Watanabe (Director of the Telecommunications Systems Division), Imagawa (Senior Planning Officer of the Telecommunications Policy Division)

4 Agenda

(1) Presentations 2 (first half) by Round Table Conference observers

[Yuge, CTO, SOFTBANK TELECOM Corp.] (Document 3-3)

- The purpose of the neutrality of networks is to create an environment where users and content providers enjoy broadband comfortably.
- Is it not possible to absorb traffic without increasing network costs through improvement of the transmission technology and performance of equipment as well as autonomous technical improvement of the Internet technology?

- As for distribution, it seems that the load on the core network can be reduced by using CDN and P2P software technology to disperse traffic.
- As for network cost sharing, we should discuss the effective use of networks before starting any discussion on cost sharing.
- What we should discuss from now include the validation of whether or not any additional costs are incurred at the moment, how to reduce the high cost of access systems, examination of effective distribution methods (e.g., CDN and P2P software), how to provide incentives for operators and users that place no burden on networks, and the cost-effectiveness of NTT's NGN and QoS installation methods. It is important to allow users to use the broadband at as low a cost as possible.

[Hoshino, Deputy Director, Corporate Planning Department, ACCESS Co., Ltd.]
(Document 3-4)

- Intra-layer (within a layer) competition must be encouraged for further development of the ICT industry in Japan, through which the vitalization of technical development and the improvement of global competitive edge are expected.
- Inter-layer (between layers) interfaces must be totally open and transparent in terms of technologies. In addition, the confidentiality of communication (Article 4) and the fairness of use (Article 6) must be ensured under the Telecommunications Business Law.
- A single business operator may provide the vertically-integrated type service as a consequence of opening inter-layer interfaces.
- It is reasonable that the rate of inter-layer connection be decided, as a rule, based on the market principle, just as general consumer goods. It is similarly reasonable that the consideration of the resources necessary to provide QoS be decided based on the market principle as far as possible. This may exclude free riders as a matter of course.

[Watanabe, President, Japan Internet Providers Association] (Document 3-5)

- Since the ISP networks are established based on the principle of autonomy and decentralization, I am afraid that ISPs will no longer exist if the neutrality of the communication layer is lost.
- The recent business status of ISPs shows that the income from connection accounts for almost 80% of leading ISPs' income, and the income from other sources accounts for 20%. In the case of local ISPs, their income sources are diversified. The trend shows that income from sources other than connection is increasing.

- Traffic volume has increased due to the always-on connection and fixed rate system of broadband, accompanied by the increase in the network costs. It appears that lowering of costs cannot keep pace with the surge in traffic volume.
- 50% of the band is occupied by 1% of the users. Moreover, the percentage that P2P accounts for in traffic volumes is overwhelming. Control is possible if the band of P2P is controlled, but it depends on each ISP's condition.
- In order to discover possible solutions, it may be necessary to discuss such issues as efforts on the provider side and the concept of the benefit principle (the pay-as-you-go cost system) in the Working Group on P2P networks (hereinafter referred to as "WG2").
- NGN will be a social infrastructure, and thus fair competition cannot be expected if providers cannot use it. ISPs must be able to use IPv6 entirely.

[Main discussions]

(Member)

Two approaches may be considered when it becomes necessary to secure a particular band as the broadband network develops. One is to monitor excessive use and the other is to adopt the pay-as-you-go system. To use them together, or to use either one, which is better? The fixed rate system for free use is desirable in the culture of the Internet, but we cannot help feeling that it will be impossible to maintain the fixed rate system in the future when considering the current status.

(JAIPA)

P2P may sometimes be used in sending/receiving movie film content. In such cases, the receiving side simply downloads the data to watch later, and does not watch the movies by streaming. It cannot be helped that streaming uses much of the band, but since slow downloading is sufficient for transferring files, file transfer must not use too much of the band. I acknowledge that some heavy users have created the culture, but it is a problem if they occupy too much of the band. WG2 should discuss matters such as the introduction of a mechanism, such as the limit system of cellular phones, which prevents use once a certain volume is exceeded.

(Member)

Relating to the relationship between primary ISPs and secondary ISPs, a primary ISP and another primary ISP are connected through peering, and thus there is not much burden on either of them. Between a primary ISP and a secondary ISP, however, do not any discriminatory cases exist, such as the case where small and weak secondary ISPs must pay large amounts to connect to fast primary ISPs, as

secondary ISPs “will be allowed to connect” to primary ISPs. In that sense, the Internet has not originally been neutral and fair. Can we not reveal the actual status like that?

(JAIPA)

I do not know the actual status in detail but secondary ISPs manage to overcome the situation by, for example, jointly purchasing connection to primary ISPs or making their own IX to connect to individual ISPs. In addition, the rate paid by a subscriber to secondary ISPs is equal to that paid by a subscriber to primary ISPs.

(Member)

I feel that local ISPs assume a greater burden. Is it because no options are available or because of a physical reason, such as great distance?

(JAIPA)

It may be attributable to great distance. Speaking of local ISPs, it is true that they do have incomes from, for example, customer services that are closely related to the community, such as sales to setting up of personal computers. Major ISPs are not engaging in such services.

(Intec NetCore Inc.)

Two ISPs that connect with each other will provide connection, even if the other party is in Brazil, once they have handed over the packet. In this sense, they are paying the extra by themselves, but it is fair anyway. Connection must be mutual also for transit and it is not reasonable for them to pay money. It is, however, difficult to separately calculate the cost of transmission by itself, as the primary ISPs also have users. Is it not true that the rates are lower in cities due to excessive competition, rather than in rural areas where rates are based on a tariff?

(MCF)

The assertions of SOFTBANK TELECOM and JAIPA sound as if they are total opposites. I agree that P2P should be controlled. We must present requirement specifications in the form of concrete theory as to what type of specifications the current P2P shall have in order to reduce the traffic volume. Possible solutions may include the cancellation of the synchronization mechanism and the use of DRM (Digital Rights Management).

(SOFTBANK TELECOM)

We recognize that we are not so different from JAIPA in our view of the issue of P2P as technology and the issue of how P2P is being used. We have no definite view on the former issue of requirement specifications for the present. The latter issue implies how we should think of the fact that 1% of the heavy users account for 50% of the traffic volume. I suggest that something like a guideline be drafted for this. For the point on which our views differ, it seems necessary to discuss the structural problem of dispersing content to rural CDN since, if there is

only one router for ISPs, traffic will centralize there and cause P2P to put pressure on the traffic.

(Member)

I agree. Things are different between SOFTBANK TELECOM, which has a large L2 network, and flets-based ISPs, and centralization in Tokyo causes more damage to flets-based ISPs. Much will only be solved if Tokyo-bound traffic is eliminated through local peering. One approach is to make a mechanism that allows traffic to fold back locally.

(IIJ)

I do not believe that P2P will keep on affecting networks over the future. If it is used in various ways, things will appear which are quite different from those that have existed so far. Thus, I think it is not essential to construct an architecture based on P2P. I recognize the centralization in Tokyo mentioned before as a structural issue, since the data volume appears to be in proportion to the population distribution. Folding back at Tokyo is not happening without reason, and it is necessary to deepen qualitative discussions.

(JAIPA)

P2P is not necessarily wrong, but we must consider what to do by looking at actual figures, not what can be expected in the future.

(APPLE)

Is the example of Company E on page 11 of the JAIPA document an example of only one company? Do you also understand the details?

(JAIPA)

It is the same for other companies. We have not looked at the content of the data.

(Member)

Since the ADSL and FTTH services of the ISP business are monopolized by the top four providers, and thus other ISPs are disadvantaged in their businesses operation, how many providers under the umbrella of the association will or may participate in the NGN field trial of NTT?

(JAIPA)

There are four major operators. (NTT corrected the number to six.) (When we confirmed it later, NTT's announcement on January 17 said ten providers, including small-scale ISPs.)

(Member)

What will NTT do if small-scale ISPs wish to participate in the NGN field trial?

(NTT)

For some cases, it may be difficult to realize their participation in terms of connection points, but we hope the network will be used by a wide range of users.

(Institute for Hyper Network Society)

ISPs are said to be disadvantaged in their business. Is it not dangerous, however, to

discuss the matter in the absence of concrete data?

(Member)

Is it not possible to decide the priority by distinguishing QoS based on the traffic content and set up a rate system according to the priority under the Telecommunications Business Law? ISPs could then compete over the content of their service menu.

(JAIPA)

That is a possible idea. We cannot disclose financial data, as it is a matter of each company's management, but we hear that they have difficulty in maintaining their operation based on connection fees alone.

(Member)

Does the Government have the power to obtain management data?

(MIC)

ISPs have a reporting obligation under the Telecommunications Business Law, but since the report does not include their financial information, we do not know the management status of each provider. However, we generally understand the current status of the entire industry, because we obtain the necessary information for administrative exercising through inquiries and individual hearings. Based on that understanding, we think the ISP business has been changing in these past few years, and the ratio of doing connection-focused business has been decreasing.

(Institute for Hyper Network Society)

It happens naturally during the course of technical innovation that business cannot be maintained based on connection alone. This problem is different from a band being occupied by some heavy traffic users. When new providers entered the ADSL service with considerably low prices, they said that existing ISPs could not do it at the same prices. Nevertheless, the service is surviving, even though some providers dropped out.

(JAIPA)

ISPs had made profits based on connection alone, but now, even in the case of major providers that gain profits, advertisement sales, digital content sales, and rental server sales are said to be contributing to the profits. We cannot tell whether providers are making profits based on connection alone, unless we look at the financial status of each provider.

(Member)

The managing status of providers is a consequence attributable to various factors, and we need discussions based on data. To establish a lasting system to use the

current capacity effectively requires careful consideration in this field where technical innovation is fast. In addition, the idea for users to select and structure services as they desire in the intra-layer competition will be favorable to professionals. This is just as it is in the financial services. Some users have knowledge and purchase individual shares upon their own responsibility and others commit entirely to professionals in the case of investment trusts. In such cases, an integrator function for services will be essential.

(2) Presentation 2 (latter half) by Round Table Conference observers

[Arano, President, Intec NetCore Inc.] (Document 3-6)

- In the discussion of neutrality, the viewpoint of how to cause innovation in the fusion of the communication industry and other industries is important.
- The point that users must come first has also been discussed, but users will not increase in number if no innovation takes place. Therefore, innovation should come first, and then general users will be able to receive benefits not only from services of the communication industry, but also from application service providers.
- In order to pick up hidden needs for communication providers on the industry side (the application side), it is necessary to provide more diversified network services.
- If access providers began to provide services to the application layer, it seems that a greater variety of possibilities will appear.
- It is assumed that innovation will take place mainly in the information processing service. Competition had once been among the same trade but recently it has become competition among providers in other fields, or among those having different advantages. How to ensure free competition in the future, including vertical integration, is thus important. For that purpose, it is essential to create an environment that allows free business development.

[Kusunoki, Assistant CTO, Microsoft Corporation] (Document 3-7)

- As for communication infrastructures, the continuity of services and the availability of options are important, since the Internet has been used more and more, and people depend on it more and more.
- As competition is global, it will be difficult for service providers (P2P, etc.) to compete globally under the circumstances where communication fees are high only in Japan. How to ensure global competition is our challenge, as players from various layers will enter the market.
- What is the most important for fee systems and standards of service is that the market

mechanism is functioning. Nevertheless, from the aspect of consumer protection, certain measures must be taken against failures in the market.

- In cases where communication operators themselves provide services, it is important to ensure an equal footing, since innovation may be impeded if things are carried out to the advantage of communication operators.
- As the foremost condition for fair competition, it is necessary for the best effort type of services to be connected to the Internet as desired. This will last into the future, since innovation has been going on over the Internet from the inception of independent service providers. We can think of cases where competition with services provided by communication operators is assumed, and in such cases, ensuring of the neutrality will be essential.
- While admitting vertically-integrated services for opening interfaces based on NGN, it is desirable for the same service to be able to be provided by anyone, and disclosure without discrimination is desirable.
- It is important to encourage market-building appeal by promoting innovation, not by restriction.

[Main discussions]

(ACCESS)

Microsoft Corporation's presentation said not to set restrictions on entering vertically-integrated services. Do you recognize that there is any restriction at present?

(Microsoft)

For example, NTT East and West cannot provide ISP services, and we feel that there are some restrictions.

(Member)

I understand that Microsoft asserts that vertically-integrated services can be admitted, as a rule, unless they go against the Anti-Trust Law. As for NTT's vertically-integrated services that have specified telecommunication facilities in place, measures have already been taken at the Anti-Trust Law level when NTT moved into the upper layer, and it is thus necessary to discuss what to do with the additional conditions. Do we not have to do anything? In addition, Yahoo! and Softbank, as well as Google and KDDI (au), have started partnership recently. What do you think about integration and partnership with overseas providers?

(Microsoft)

Having seen that innovation has brought various things, we are afraid that problems may also occur in terms of global competitive edge unless some guidance is provided for the free market. If rules are formulated afterwards, the discussion will be on how to bring what has worked in

foreign countries into Japan, and no new ideas will come out of Japan. International mergers and acquisitions are welcome, so long as they are beneficial to consumers. However, the restriction authority must monitor such to ensure that no abuse of priority positions will occur.

(Member)

Which country shall monitor whether there is any abuse of priority positions in international mergers and acquisitions?

(Member)

The anti-trust authority of each country determines such. According to the effect principle, the Japanese Anti-Trust Law can be applied to Microsoft of the United States.

By the way, Microsoft provides both the platform and application called OS. What is the scope of information you provide indiscriminately?

(Microsoft)

As for the operating system, we have technically disclosed the API, but what corresponds to this in the communication service? The difference between operation systems and networks is not only the technical specifications for connection. What matters is the connection being allowed.

(Member)

In the case of communication, users have the right to use networks, and thus information must be disclosed. Users' rights exist also for innovation, and it thus comes to the logic of what interface is to be provided.

(Microsoft)

We decided to prepare "Windows principles" voluntarily, because we thought operators must act on their own to obtain trust from related parties as what can be done if what is disclosed will change over time, depending on the way systems are linked. It is difficult to determine a priori whether the disclosed content is good or bad.

(Intel)

In the future, information processing service providers may provide services jointly with infrastructure service providers. Will the neutrality be maintained in such cases, or should we proceed at the cost of neutrality?

(Intec NetCore)

No innovation has been occurring, since there is no difference in services among ISPs and the prices are low. In the future, I believe that innovation will take place through fusion with the network side. Then, to the extent that innovation can be caused first for vertically-integrated type services, we must not hamper it, admitting that fairness must also be discussed.

(Institute for Hyper Network Society)

I agree that chronological changes must be emphasized and innovation is important. Do you mean that it is better not to impose any restrictions, because comparison of

the disadvantages of not imposing restrictions at the protocol level for increased P2P traffic and those of hampered innovation due to restrictions shows that the latter will be greater? Otherwise, do you think that price competition may be encouraged freely for traffic by admitting even services that adopt pay-as-you-go charging?

(Intec Netcore)

The latter. ISPs currently apply the fixed rate system for all services, but ISP's may decide whether they should adopt the pay-as-you-go and band limitation systems.

(Institute for Hyper Network Society)

Is it correct for us to understand that ISPs adopting of the fixed rate system is not legally mandated, and the market is what chooses it?

(MIC)

Yes, that is correct.

(Institute for Hyper Network Society)

Are ISPs allowed to interfere according to the types of traffic? Seeing that they are actually doing so, is it not prohibited to do so in general terms? Does this not violate the confidentiality of communication or the principle of fairness?

(MIC)

From the viewpoint of the Telecommunications Business Law, it involves the confidentiality of communication stipulated in Article 4 and the fairness of use in Article 6. Regarding Article 4, the question is whether the confidentiality of communication is violated or not when we restrict communications. Regarding Article 6, the question may be whether it is fair to restrict some particular applications. The Government must watch individual cases to see what "diversification" means when we say "diversification of services".

(USEN)

It is a very sensitive issue. Is a consensus being built on the possible limitation of P2P in the light of the Telecommunications Business Law, consideration of contracts and the Law for Preventing Unjustifiable Lagniappes and Misleading Representation?

(MIC)

The Government has not ruled on limitation of P2P, but we need to discuss it from now on. We believe that we may of course develop something like a guideline to keep providers from becoming confused.

(Member)

Is it correct for us to understand that there is no problem if telecommunication operators enter into supplementary contracts that stipulate the provision of limitation against Winny with users in advance?

(MIC)

Generally speaking, there is no problem in providing services with certain conditions attached from the beginning. It seems difficult, however, to build consensus for attaching such conditions to contracts afterwards.

(Member)

As supplementary insurance contracts, for example, is it possible to set prices flexibly based on the combination of menus desired by users?

(MIC)

We must see specific details but it may be possible since the diversification of services per se is favorable.

(MIC)

Discrimination in prices and services is allowable, but what matters is whether such discrimination is reasonable or not. For example, confusion may be caused unless we get things straight for, for example, the limitation of particular applications from a certain point of view. From this point of view, we must discuss, in this venue, what direction we should take.

(Institute for Hyper Network Society)

If we apply it to the intra-layer competition, what layer does Winny cover?

(IIJ)

Application layer, I would guess. Who has the ability to control it is important.

(Institute for Hyper Network Society)

If it is selectable, is it possible to charge Winny users more?

(Member)

That is the question of rates, but I recognize that the fixed rate system has been introduced in order for users to use extra infrastructures. As for rate setting, will providers present a rate that will be disseminated, and is it permissible to leave it to providers? To some extent, it can be considered that there are things that can be directed with rates. Is there any opportunity for experimentation?

(JAIPA)

No ISPs block Winny. It may be limited against users who do not want to use it, but that will be under individual contracts.

(Member)

We must prepare experiments and get ready to adopt what may emerge anew. It is true that the provider side should not limit content on their own.

(Microsoft)

It is important that information on the limitation of content be disclosed to users. If services were diversified without ensuring such disclosure of information, it would

be impossible for users to make a proper selection, even though options were available. Consideration for the asymmetry of information is necessary.

(Member)

I understand that innovation is important, but may I take that not to mean industry will be first and ignoring consumers?

(Intec NetCore)

No, it does not mean that. Nevertheless, it is ultimately a question of balance. I think that it would be better for consumers to have a diversified range of options than be provided with what the communication industry has selected.

(Member)

We must promote vitalization of the market and the improvement of consumer benefits while striking a balance between the two. Comparison with financial products was mentioned in relation to service prices, but, even in cases of financial products, consumers appear to be provided with options although products are actually sold in a manner that does not allow for choices. Moreover, not many consumers purchase products with a full understanding of the details. Consequently, it has been said in the financial field that consumers will not accept the situation unless they make rules. How information is disclosed is important. Some say that it is sufficient if a certain range of options are provided, but the information communication field appears to be under circumstances where the consumer right to receive information disclosure is insufficiently satisfied. If we can discuss information communication just as we discuss ordinary products, we may be able to get answers for how to set prices and how the Government should place restrictions. As it was in the financial field, of course we must discuss trades between a professional and a professional and those between a professional and an amateur separately. We must note that the problem of asymmetry of information exists in cases of trades between a professional and an amateur. Since financial products are invisible, providers are pushing discussions in the direction that they should recommend what suits consumers based on the principle of suitability. It seems the same can be said for the communication field.

(Member)

We must give serious thought to the relationship between line installers and providers, as networks will be based on IP in the future. We expect that providers will be active in making suggestions for the business development.

(Member)

The analogy with the financial field is important, and the process in which the Securities and Exchange Law changes to the Financial Instruments and Exchange Law is also important. However, one thing that differs from communication is that the financial field is the world of professional versus professional and professional versus amateur. Communication involves the

relation of an amateur and an amateur as in P2P. This issue must be considered in WG2.

End