Draft Summary of Minutes for Study Group on Communications Terminals in the IP Era (2nd Meeting)

1. Date:

Friday, January 26, 2007, 10 a.m. to noon

2. Location

Special Conference Room 4, 4th floor, Mita Kaigisho (Conference Hall)

3. Attendees (Last names in Japanese alphabetical order; honorifics omitted)

(1) Members

Hitoshi Aida (Chair), Mutsuya Asano (alt: Yoshikazu Kobayashi), Masashi Oshima, Takemitsu Kunio (alt: Naoki Sato), Mikio Goto, Hiroshi Kondo, Yoshiyuki Sukemune, Nobuko Takahashi, Miwako Doi, Takashi Hanazawa, Toshiki Hayashi, Susumu Hirano (Acting Chair), Hiroshi Fujiwara, Akira Maeda (alt: Hiroyuki Mano), Yuichi Matsushima (alt: Tatsuya Yamazaki), Makoto Miwa (alt: Hirotada Yaginuma), Akira Murakami, Toshio Yamada (alt: Yoshiaki Kobayashi), Tetsuya Yuge, Makoto Yokozawa, Fumio Watanabe

(2) Ministry of Internal Affairs and Communications

Mori, Director-General of the Telecommunications Bureau; Sakurai, Director-General of the Telecommunications Business Department; Naito, Deputy Director of the Telecommunications Consumer Policy Division; Watanabe, Director of the Telecommunication Systems Division; Nakamura, Deputy Director of the Telecommunication Systems Division

4. Agenda

(1) Presentations

(2) Others

5. Outline of proceedings

[Presentations]

○ Presentations by members

- Watanabe (member): KDDI Approach to the Next Generation Network and Issues of Terminals
- Fujiwara (member): Next Generation Network (around 2015) and Future Image of Terminals
- Doi (member): IP Terminals from the Usage Perspective
- Murakami (member): Current State of Security Threats and Issues of Measures

○ Main comments of members in the question and answer session are as follows.

- Since the NGN is to be built from now, discussions on the allocation of responsibilities for the NGN may possibly be able to start from an early stage. Should the scenario to allocate responsibilities in connecting to the Internet be considered together with this, or should the connection to the Internet be considered separately?
- The direction of the study on the allocation of responsibilities is a scenario to be discussed in the future and it would be difficult to make a decision at the present stage.
- In the case of interconnection by setting demarcation points among operators, not limited to the case of the NGN, it is easy to conduct discussions by clarifying the points to discuss, such as responsibilities and interconnectivity. In the case of interconnection with the Internet, on the other hand, it is difficult to discuss responsibilities, interconnectivity and others in a uniform manner. In order to clarify discussion points, one idea would be to separate comprehensible patterns from the others.
- In the case of interconnection with the NGN, demarcation points are comparably clear and a relevant party will be able to take responsibility for accidents or other events. In the case of interconnection with the Internet, on the other hand, since it is difficult for any specific party to take responsibility, it may be a better idea to make compensation without identifying who bears costs, as in the case of insurance. It would be best, without doubt, if coordination could be made among operators, and if such a method could be taken, it would be reflected in the way of taking responsibility in the transition to the NGN.
- In the case of the conventional manner of Internet use through PCs, self-responsibility has accounted for a large part, frequently causing external diseconomy. However, in the future, when telephones and home appliances are connected as IP terminals to make themselves an essential infrastructure, ensuring minimally required safety and security is necessary so that anyone can use them. To resolve the issue, it will be necessary to take measures based on self-responsibility as well as remedial measures to deal with external diseconomy, with the mutual cooperation of parties concerned, through protection against vulnerabilities.

- Since the network where IP terminals are connected develops into a part of utilities services, it is primarily important to secure communications service to prevent danger to life. For this purpose, clarifying the body to take responsibility and take effective measures is important, including setting up a contact point to prevent delays in solving problems due to failure to reach the appropriate party at once, as well as providing detours on the network to solve technical problems.

  Compared with the Internet at its initial stage, the role to fulfill and the policy for the current and future network have changed. In order to deal with such changes in the policy and others, we want

to clarify the part that the change in operations can deal with and the part where the architecture of the network must be reviewed anew.

- As for the functional allocation between terminals and the network, the direction in which the terminal side plays a role of very sophisticated functions can also be expected, as in the case of the intelligent routing of Skype, where the terminal side selects the route. Many problems with IP phones have recently occurred, and what should be done so that urgent calls or the like should be secured at minimum, is argued. Besides voice communications, it will be necessary in the future to select the types of communications, such as health checks, that must unceasingly maintain the interconnection. For this purpose, cooperation between the terminal side and the network side will be important.
- With the diversification of IP terminals, it will become a basic concept to classify IP terminals based on the required safety and others, establish a license system in accordance with the level of danger, take measures to reduce losses, and properly allocate the costs.
- Communications in the future will be accomplished according to the scenario to decentralize terminal and network functions, make those functions cooperate properly with each other, and achieve further sophisticated communications. However, in order to deal with the increase of security issues and others, it will be important to discuss the optimum degree of decentralization. On the other hand, since the functions are centralized in some cases, such as Google, there will be the idea that responsibilities should be centralized to a certain degree so that they can be more visible. In order to conceptualize what the decentralization, centralization, and cooperation of these functions and responsibilities ought to be, attention must be also paid to the social nature of terminals so that the terminals hold an affinity for society.
- Assuming the situation in 2010 and 2015, there will be aspects of both centralization and decentralization. With terminals becoming intelligent and having a higher processing performance, socially centralized operations will be accomplished using decentralized computing power. In such a manner, services will be optimized with a mix of both trends.

- As for the use of terminals in the future, there are two aspects, dangerous and useful as a life kit (utensil for daily life). Therefore, in accordance with changes in the security environment, a mechanism to protect the weak will be necessary on both the network side and the side providing services.
- The fact that some users have their terminal devices contaminated by fraudulent emails or others is seen as a problem at this time. To deal with this kind of security vulnerability originating from users, which cannot be protected by the network and terminal devices alone, a user license system and/or measures to ensure minimally required literacy will be necessary.
- Future communications terminals will have to be tools anyone can use as utensils for daily life,

such as army knives. As pointed out, in many cases security can be protected if users have relevant knowledge, and the research and development of software robots for those who lack information to complement users' knowledge is interesting.

- Whether motor vehicles and aircraft are good reference examples to study the world of computers and networks is questionable. This is because computers differ from motor vehicles and the like in that measures for computers must be accomplished without taking time. In addition, motor vehicles and the like are nothing more than tools for people and society, while computers are replacing the functions of human beings and society themselves. Unless imagination is exercised based on the major premise that computers are something quite new, appropriate measures will not be found.
- While the situations differ somewhat, if the information infrastructure is viewed as roads where information passes: roads and railroads. Imagination will be excited and the ideas of our predecessors could be utilized to spark the viewpoint. In the evolution of human society, what was conventionally to be protected was physical safety in most cases. However, in the advanced society, this is shifting to safety of the spirit. In order to deal with information safety, the model of motor vehicles and the like may be utilized.
- The safety of motor vehicles is mainly ensured by regulations. Using such as a reference, are communications terminals going to be regulated or deregulated?
- Regulations and industrial promotion constitute a pair of wheels. The administration will place regulations for the purpose of safety and industrial promotion and the private sector will create vital services and terminals under that condition.
- When the Internet was spreading, many held the opinion that it should not be regulated. However, legal regulation has become necessary in accordance with the increase of vicious practices. Convenience and the safety and security are in a trade-off relationship based on freedom and regulation, which is a matter of balance, and therefore optimum regulations will be required.

- Similar to medical treatment and financing, information and communications are not perfectly safe, but highly useful. They will therefore have to be utilized carefully. From the perspective that consumers use what is not necessarily safe, it is necessary to clarify the scope of self-responsibility and carrier responsibility and make rules for the cooperation and the allocation of responsibilities among carriers. In the financing sector, rules for the cooperation and the allocation of responsibilities among institutions have long been argued, and effective solutions are still being argued. Financing and communications are common in that both handle something invisible. Financing is important, as it relates to property, and communications are as important as financing, as they very frequently involve matters related to human life. Therefore, sufficient

studies are requested.

- As for the present situation of the telecommunications industry, mobile phones already have various functions, such as banking and credit, incorporated into them, and as measures to solve the complicated responsibility allocation issues, mobile phone carriers must take all responsibilities vertically for their provision of terminals, applications, networks, and others.

- It is desirable for communications using IP terminals to enhance consumer convenience and company growth further. For that purpose, it will be required to ensure safety even at certain costs, including regulation, so that those who have only used black telephones and are not knowledgeable about security or software can use IP terminals. There will also be growth in another field of IP terminals that are used freely through self-responsibility by those who are knowledgeable about security and software. Consequently, classifying terminals and properly dealing with each of the classifications will lead to an optimum allocation of resources.

  In the present Internet world, even if viruses or the like spread, the responsible body is not clear and there is little cooperation among concerned parties, leaving the situation, as it were, in external diseconomy. To resolve this kind of issue, discussions, in advance if possible, on who is responsible will cause less difficulty than establishing rules after problems have emerged from using the network.

END