Summary of Minutes of the 1st Meeting of the Study Group on the R&D Human Resources Development in the ICT sector

1.Date and time: November 1 (Wed), 2006 10:30 to 12:30

2.Location: Special Conference Room No.4, 4F Mita Kaigisho

4.Attendees:

    (1) Members (Honorifics omitted)

      Shigeyuki Akiba (KDDI R&D Laboratories Inc.), Tohru Asami (Tokyo University), Kenji Ohta (Sharp Corporation, by proxy of Yohichi Kato), Shingo Ohmori (National Institute of Information and Communications Technology, by proxy of Kiyoshi Sekiguchi), Kazuo Kyuma (Mitsubishi Electric Corporation, by proxy of Kohji Matsuyama), Takemitsu Kunio (NEC Corporation), Shinji Shimojo (Osaka University), Harushige Sugimoto (Oki Electric Industry Co. Ltd., by proxy of Toshiyuki Tahara), Shinya Tsuda (Sanyo Electric Co. Ltd., by proxy of Tohru Kitamura), Miwako Doi (Toshiba Corporation), Takashi Hanazawa (Nippon Telegraph and Telephone Corporation), Hiroshi Harashima (Tokyo University), Yasushi Fukunaga (Hitachi, Ltd.), Nobuyoshi Fugono (Advanced Communications Research Institute International), Takashi Matsuyama (Kyoto University), Yoshiyuki Miyabe (Matsushita Electric Industrial, by proxy of Hiroshi Koga,Akio Motai (YRP R&D Promotion Committee), Seiichi Yoshikawa (Fujitsu Laboratories Ltd., by proxy of Masanori Matsuyama)

    (2) Ministry of Internal Affairs and Communications

      Matsumoto (Director-General for Technology Policy Coordination), Kodama (Director of the Technology Policy Division), Monma (Chief of the Research and Development Office, Technology Policy Division), Taira (Senior Officer for Technology Policy Planning and Coordination), Takada (Assistant Director of the IT Utilization and Human Resources Development Division)

4. Outline of proceedings

    (1) Opening

    (2) Address by Director-General for Technology Policy Coordination of the Minister's Secretariat

    (3) Meeting guidelines and opening of the proceedings to the public

       Based on Documents 1-1 and 1-2, the Ministry of Internal Affairs and Communications explained about the meeting guidelines and opening of the proceedings to the public and they were approved by the attendees.

    (4) Selection of the Chairman

       Based on the meeting guideline, member Harashima was selected as Chairman.

    (5) Agenda

   1) Current status and issues of the R&D human resources development

       Based on Document 1-3, the Ministry of Internal Affairs and Communications explained the attitude of the Government toward the R&D human resources development and the status of its efforts. Then followed the explanations on the current status and issues to be solved regarding R&D human resources and the status of their efforts by members, Ohmori (by proxy of Sekiguchi), Motai, Fugono, Miyabe (by proxy of Koga), Fukunaga based on Documents 1-4, 1-5, 1-6, 1-7 and 1-8. In addition, Document 1-9 was presented by the Ministry of Internal Affairs and Communications on behalf of member Yamashita who was absent.

   2) How to proceed with the study in future

       Based on Document 1-10, the Ministry of Internal Affairs and Communications explained about the items to be studied from now on.

   3) Exchanging comments

       Comments were exchanged on the current status and issues to be resolved concerning R&D human resources development, as well as on how to carry on the future studies. Given below are the main comments.

       ・Since human resources development involves a wide range of issues, it is

necessary to make discussions with an emphasis on certain points. Human resources may include technicians, such as programmers who are said to be much needed, but we would like to proceed with our discussions with a focus on how to develop human resources who can take a proper leadership role in R&D (e.g. directors, producers, and managers). Considering when to start growing human resources, we expect to place those who joined companies after graduated from universities at the center of our discussions.

・What matters may be "before university" or "after university" if viewed from a person in a university such as myself. Under the circumstances, I expect it to be "after university". Nevertheless, I personally feel that the things are also very tough "before university"; it appears that the ICT sector no longer attracts students entering universities. One of the reasons for this may be that students have been familiar with ICT since they were young and thus it is no longer particularly fascinating for them, even though we elders feel that ICT is now mature and very interesting. In addition, it seems that students do not feel electronics companies have sufficient vigor to lead the country.

・I know two cases as examples of fostering project leaders. One is the "Pioneer Project" of JST for investing research expenses in developing the qualities of young researchers. Its mission is to foster researchers who will take leadership in research rather than to seek for actual achievements in prior research projects. Another is the "Unprecedented Software Project" of IPA, in which the program manager let young researchers develop software in anticipation of their potential abilities.
Young researchers selected for these projects feel quite honored. I believe that to feel honored will propel their growth.

・We once had an engineer with fairly advanced skills sent from a company and

trained him, but he could find no job to fit his ability when he returned to his own company. We think it also important to make preparations on the receiving side, such as a setting where newly developed human resources who create innovation can be accepted.

It is up to the company side whether or not the developed "super manpower" can be appropriately utilized.

・ Indeed we often hear that developed human resources cannot be fully utilized when they return to their companies. Besides nurturing manpower, it is also necessary to consider the work to be undertaken when they return and preparation of the environment as a part of such development.

・ ICT technology has been utilized in personal computers, cellular phones, domestic appliances and has now moved to automobiles. Is it possible to discuss in this Study Group what type of manpower is desired and what form can be considered based on comments provided by persons representing automobile manufacturers?

・ In order to propel research projects, project management now requires not only technologies but also an in-depth knowledge of copyrights and other issues.

・ It is a problem that insufficient human resources have been developed where new technologies must be introduced one after another in R&D and business operations. In the past technicians could be fostered systematically over a period of years, but now such conventional ways do not work in such a situation where technologies are rapidly changing. It is necessary to train young people who are the main operators by making them familiar with new technologies. We must not only think of the training required for current technologies but what will be necessary in the future. We need to

systematically make programs considering what technologies ICT can provide to industries that will grow in the future and what technologies they will require. Otherwise, we will fail in developing young people who will play major roles in the future.

・ Now is the time when researchers as well must think of business models. Creating innovations requires both technology and business models.

・ Nurturing all the necessary human resources in-the-making. I believe that it is essential to develop as many people with potential as possible.

・ We think that it is important for us to prepare a framework that allows proper allocation of human resources to new technologies when essential technologies change dramatically as time goes on.

・ There are ways to train leaders, producers, and managers by systematically setting up procedures and establishing an appropriate methodology.

・ There is no silver bullet for human resource development and we need to continue these discussions step by step. We also need to identify what sort of human resources should be addressed.

・ As a result of discussions so far, it seems that two types of human resources should be addressed. One is those who can create new businesses; namely those who can link R&D with innovation as stated in the UNS Strategy Program. The other is those who can come to grips with new technologies in the world that is changing at high speed.
It may sometimes be difficult to guess in what direction the ICT sector will

evolve, and thus it is essential to consider how to foster young people who can read the future.

4) Establishment of a working group

Based on Document 1-11, the Ministry of Internal Affairs and Communications explained about the establishment of a working group and the issue was approved by the attendees. Then, the Chairman appointed the members of the working group as given in the Exhibit of Document 1-11. Member Asami was appointed Chief of the working group.

Automobile-related persons referred to in the exchange of comments were approved to be added to the working group members.

5) Schedule of future discussions

Based on Document 1-12, the schedule of future discussions was explained by the Ministry of Internal Affairs and Communications and approved by the attendees.

(6) Closing