1. Introduction
On November 17, 2012, the 8th Career Development Workshop for Young Students and Professionals has held on the Setagaya campus of Tokyo City University. This workshop was planned by IEEE Tokyo GOLD (Graduate Of Last Decade) Affinity Group and IEEE Japan Council WIE (Woman in Engineering) Affinity Group and held under the auspices of Student Branches of Keio University, Chuo University, Tokyo Institute of Technology, Tokyo Denki University, Tokyo University of Science, and Meiji University.

2. Abstract
2.1 Object
This workshop was for the undergraduate students, and graduate students both in master’s course and doctor’s course expected to play a big role in society. The object is to have participants to change their self-consciousness and think about their future plan through the group discussion.

2.2 Content
We invited 8 facilitators to lead discussions from research institutions and academic institutions. In eight groups (A-H), including each facilitator we discussed a specific theme shown in the list below. The themes were settled based on the facilitators’ ideas. Supporting student staffs also joined each group to encourage the discussion and register it. At the end of the program, each group presented the content of the discussion and conclusion.

Also, we invited an internship student to this workshop and had her speak about her experience for the first time in our workshop.

2.3 Program
The program of this workshop is following.
Chairperson: Akira Nakamura (IEEE Tokyo University of Science Student Branch)
Host: Mamiko Inamori (IEEE Tokyo Council WIE)
13:00 – 13:30 Reception
13:30 – 13:35 Opening Greeting
Masatomo Sato (IEEE Tokyo GOLD Secretary)
13:35 – 14:10 Introduction of facilitators
14:10 – 14:15 Break
14:15 – 15:45 Discuss in each group
15:45 – 15:55 Summarize the discussion
15:55 – 16:00 Break
16:00 – 16:50 Presentation
16:50 – 17:00 Closing Greeting
Takako Hashimoto (Chiwa University of commerce, IEEE Japan Council WIE Chair)
17:30 – 19:30 sociable

3. Workshop
The number of participants in the workshop including staffs was 57.
- Students 41 (25 IEEE members)
- others 8 (8 IEEE members)
- facilitator 8
And the photos in the workshop are attached in

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<td>B</td>
<td>Yuhei Onobara, Nao Kobayashi (Internet Initiative)</td>
<td>Who can perform a important role in internet industry?</td>
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<td>C</td>
<td>Mikiko Karasawa (TOSHIBA)</td>
<td>A course newcomer engineer aspires and what to do for it</td>
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<td>Tetsu Kobashikawa (NTT)</td>
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<td>Yumi Itane (FUJITSU)</td>
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<td>Daisaku Tanaka, Raita Mori (Recruit Career)</td>
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<td>Shingo Miura (Pharmaceutical Department, The University of Tokyo Hospital)</td>
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Group A

Group A discussed "What we needs to work in a foreign company" with 6 members including facilitators, Mr. Ebihara and Mr. Koike.

First, because the students were not sure of foreign companies, we simply gave some ideas each other about "what we needs to work in a foreign company". We summarized them to five factors, which are "Communication and English skill", "ability to adapt oneself to each environment", "individuality and activeness", "technological skill and knowledge" and "planning and ability of problem-solving".

Then we had Mr.Ebihara to tell the specific examples at the company, which was about "it brings good evaluation to not only do his own job but also do more to contribute to the company's achievement." We argued what is required to have a great evaluation. Then we concluded our discussion. To deliver results, we need "Communication and English skill, and ability to adapt oneself to each environment" and "planning and ability of problem-solving". And we should have "individuality and activeness" to achieve "planning and ability of problem-solving". To solve the problems, people who have "individuality" can gain the knowledge and "activeness" can absorb the technological skill from their seniors.

Thus, we know that we should have a plan everyday and communication skill and activeness as well to work in a foreign company.

(Group A support: Tatuya Yamaguchi (Tokyo City University))

Group B

We discussed what the Internet is and we had "invisible" and "infrastructure" which makes people to feel the industry to be uptight. Now the Internet is necessary like the other infrastructure such as waterworks and electricity. A lot of application including entertainments using internet connection appears one after another. And furthermore, it is important related to the human life as remote medicine needs the Internet.

We talked about what kind of jobs there are in the internet industry to know people adequate to work in it. Then we had the jobs classified into four groups, which are "control", "research", "development" and "management". In the "control" part, as they maintain the internet connection, they should be diligent, and someone who can cover the failure and act by each occasion. "Research" requires to create a new technology, they should be someone who can create new things and be on the watch for them. And "Development" to make the new technology to be easy to use for the public, they should be someone who is good at combine the new technology and the old one. Both "Research" and "Development" needs also the ability to assume the worst situation and the cost effectiveness. In "management" part asks to manage the research and development so they should someone who can evaluate. And also we found that four characters are import for any jobs to work in the internet industry which are to collaborate with others, to communicate with others, not to have a lot of work by oneself and to complete each task perfectly.

(Group B support: Akira Nakamura (Tokyo University of Science))

Group C

In group C, we had discussion about the theme, "a course a newcomer engineer aspires and what to do" with 7 members including our facilitator, Ms. Karasawa.

First, we imagined what we would want to be if we were the newcomer engineer in a company.

It came out that we wish to create something never made before, and to take a responsible post such as manager. In total, all our ideas summarize one, to become an engineer who can change the world.

Next, we thought what to do for our future ideal and gained the ideas of improvement in English, global perspective, and research.

As we also had the idea in not only the work, but also the private to have own family, we discussed what to do for it. The ideas we got were to see more people, brush up own skills and to do filial piety.

In this way, though we had time to think about the work and private individually, we found that there are many mutual points, such as making more personal relationships, improving the communication skill, being active, and remind own destination. Our conclusion was these are what we should do now for ideal future.

When we think about dreams after starting working, it's not the goal to find job and the goal is farther than that. We could gain this idea through this opportunity and found what to do for the real goal as well.

(Group C support: Azumi Kano (Chuo University))

Group D

In group D, we had discussion about “What is important for engineers” with Mr. Kobashikawa as a facilitator from NTT.

First, we as students and young researchers, thought about our dreams and problems and what to do for them with advice from Mr. Kobashikawa. The most common ideas were “the success as an engineer”, “enjoying both work and private” and “anxiety for working as an engineer”.
We discussed how to enjoy the work and grow up as an engineer based on ideas we had. We could conclude that to make the long-term goal, be positive, be inspired and try are important. Asking more inspiration to make actions will broaden our horizons and makes ourselves grow up as an engineer.

(Group D support: Yasunori Yamakawa (Meiji University))

■ Group E

In group E, we discussed what is the comfortable company to work with Ms. Itane from FUJITSU.

Before we started to talk, we confirmed the meaning of this theme and asked the reason for participation each other. As most of the students haven't finished the job-hunting yet, the many of the reasons were because we wanted to know the point to find and choose the company. We exchanged the opinions about the problem and the causes among them. Many of them were related to the relationship between boss and colleague and the matter of salary and overtime work. The opinions were divided between women's and men's about the relationship between the boss mush older and at close age. So we classified the tasks and suggest the solution.

We concluded that the comfortable company to work is where we can have the fare evaluation, the system for salary and overtime work is well organized, equipments are full, other systems as well and we can make a good relationship with other associates. We proposed the financial settlement, Employee Satisfaction and its feedback, and holding events with one organization.

(Group E support: Shinji Yasuda (Tokyo Denki University))

■ Group F

In group F, we discussed about the theme “What is the future ICT engineer” with a facilitator Mr. Shiga.

First, we wrote the words that occurred to us when you hear a word, “ICT” to get the mutual understanding. And we picked some keywords for discussion among them.

The first word was “ubiquitous”. Though this word sounds like going out of use now, the concept has been spread to the world by the prevalence of smart-phone, IT-household appliance and others. On the other hands, a new legal problem that has never occurred before like controlling an air conditioner, copyright of the TV program when it is upload on the Internet, and protection for personal information of electronic medical record, which was indicated as well. So we can say that ICT engineers should know not only his own specialty but also the laws around the world.

Next, we picked the words, “cloud” and “SNS”. Now when we are familiar to these, engineers can have connections each other individually and can start their net business with small number of people soon. About this opinion, Mr. Shiga told us that it is important to have more favorite fields and always observe the situation in these fields to enhance your own value. On the other hand, it is also necessary to know a big organization, company and its mechanism because basic research and large-scaled project needs them.

Thus, we concluded that ICT engineers should learn more like law and mechanism for the society, then will become great and reliable as a person in an organization.

(Group F support: Takehiro Sato (Keio University))

■ Group G

In group G, we had a discussion with the theme, “the image of engineer required by a company”. Our group consisted by facilitators, Daisaku Tanaka and Raita Mori from Recruit Career, and students both who haven't done job-hunting yet and have finished. We made the final goal to cover the gap between how students imagine about companies and how students who companies want are like and started the discussion with talking about things we should know before starting job-hunting. We learned what is needed and which experience works to cover the gap when we know things we require for companies. It was difficult find final conclusion in a limited short time but we can have a first step of the ready for job-hunting.

(Group G support: Takahiro Goto (Meiji University))

■ Group H

The theme for group H was “Working in a different field from what you studied in universities”. We gathered our ideas for good points and bad points respectively. Some said that it wastes the knowledge he has learnt in the university and he is inferior to others who have learnt that field as their major as negative opinions. But we can deny these negative ideas by the positive opinions that the way to approach for problem-solving that he has been using so far works and that he can create another value by combining the ideas in the previous field and in a new field.

At the beginning of the discussion, most of us were negative for working in a different field, but we could conclude that we don’t need to be bound by our present field and just create the new value by using our knowledge and experience we gained when we are students.

(Group H support: Takuro Kasahara (Tokyo University of Science))

4. Questionnaire

After the workshop, we asked participants to answer the questionnaire.
4.1 Answer

88% of participants, 50 people, answered for the questionnaire (39 students and 11 others). The organization of students is shown below.

4.2 About workshop

We had participants to evaluate this workshop about contents, usefulness and length of time on a scale of one to five and tell the reasons. The five scales for each question are below.

1. Contents: very good, good, average, bad, very bad
2. Usefulness: very useful, useful, average, useless, very useless
3. Length: very short, short, appropriate, long, very long

The answers for each questions is shown below.

We could have favorable reviews from more than 90% of people as well as the 7th workshop. The specific reasons for the answer from students were:

- It was a good opportunity to learn the gap between myself and the other people about the opinion during discussion. (B4)
- It was nice to speak with the people from other universities. (M1)
- As I could know the various things, I would like to use this experience to advantage for job-hunting. (M1)
- It was valuable to motivate myself for job-hunting. (M1)
- I could know the specific points that recruiting staffs from companies watch carefully that would be my barometer for job-hunting. (M1)
- It was very beneficial that we could discuss not only students but also with people from companies. (Unknown)
- It was fun that I could hear many opinions and what people from companies told was very helpful. (Unknown)

And also the reasons from others were:

- Many of the students subjectively participates the discussion.
- It was nice to have students join the work positively. And the supporting staff and young men leded our discussion forward.d
- It was also the nice opportunity to reconsider about my career and way of thinking, which was so meaningful for me, too.

About (3) Length, “enough” was increase very much (from 49% to 62%) and there was no one who chose “long” comparing the 7th workshop. The reason for “short” and “very short” were:

- It was better that we had more time for discussion. (B4)
- If we had had more time, we could had deeper discussion and summarize our opinion smoothly. (B4)
- I want more time for summarize such as 20min. (Unknown)
- The theme was abstract, which needs more time. (other)

There were many requests for the time for summarize in a discussion.

- As many of the discussions were rather notional, I have wanted to spread the talk about technological part. (M1)
- The theme of discussion was so obscure that I felt the time was very short. (M1)

There were some for the discussion theme. Though the themes were decided by facilitators themselves, we would like to coordinate the theme carefully in advance to provide attractive themes.
4.3 Next workshop

We also asked what kind of events and fields hereafter they expect for our congress to have with multi-choices on questionnaire. The choices are

(1) Events
- Lecture meeting
- Discussion
- Informal party with other students
- Lecture about skills
- Other events (free writing)

(2) Fields
Electronic Engineering / Electrical Engineering / IT / System Engineering / Communications / Material / Physical properties / Physics / Chemistry / Mathematics / Education / Medical / Management / Economics / Politics / Social Science / Philosophy / Psychology / Arts

The total results for each question are shown below. About (1) the events they expects, the rates for “Informal party with other students” was highest, and “Lecture meeting”, “Discussion” and “Lecture about skills” are followed in order. Comparing the 7th workshop, the rate desiring “Informal party with other students” was greatly increased (from 14 people to 29) and the one for “Lecture skills” decreased (from 21 to 12). They wanted the researcher from companies rather than from academic institutions as a speaker for the lecture as they wanted in the 7th workshop. About the contents in a skill lecture, almost the same number of people wished statistics and presentation. “Other events” refers advice for career with 1 by 1, programming contest and company tour. As we have a company tour once a year held by IEEE Tokyo GOLD Affinity Group and Student Branch in each university, we would like to announce this event carefully from now on.

(2) Fields
Electronic Engineering / Electrical Engineering / IT / System Engineering / Communications / Material / Physical properties / Physics / Chemistry / Mathematics / Education / Medical / Management / Economics / Politics / Social Science / Philosophy / Psychology / Arts

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5. Summary

This 8th workshop also received a favorable review by participants, which had discussion with 8 groups. We would like to offer workshops with high quality and want many students and young researchers to use this event as an opportunity to think about their future careers. The next 9th workshop is scheduled in June 2013.

We appreciate to Mr. Ebihara, Mr. Onohara, Ms. Kobayashi, Ms. Karasawa, Mr. Kobashikawa, Ms.Sakane, Mr.Shiga, Mr.Tanaka, Mr.Mori and Mr.Miura who participated in this workshop during precious weekend.