#### Report for JSPS Asian Science/Academic Seminar FY2012 <Summary>

#### Date November, 5, 2012

## 1. Title of Seminar JSPS-NRF Asian Science Seminar: Seminar on How To Proceed With Research Activities in Developing Assistive Technology

#### 2. Purpose of Seminar

Not only has Japan long since entered the world of super-aging society, but Korea too is facing a rapidly aging society year by year. Although both countries have instituted a variety of developments in assistive technologies for the elderly as well as setting up demonstration experiments such as Smart House and Smart City etc., it seems necessary that these issues which both countries are currently facing should be dealt with not only by the researchers and developers who design the assistive technologies for the elderly, but also by national and administrative systems with the required knowledge of specialists from various fields.

As for the research development, in order to lower the development costs and speed up popularization, it is necessary to understand the importance of concepts such as Need-Finding that involves users, Design Thinking, and Multi-Disciplinary Approach. Also through the cooperation of many regions and countries, the parameter of users increases, which leads to the validity of investing social capital into research development. At the same time, it is also important to consider the aspect of "Adjustment" to different cultural backgrounds or social systems.

The purpose of this seminar is, in addition to learning about the advanced academic research in the field of assistive technologies for the elderly, to provide the researchers the opportunity to examine and reconsider how the direction, method and evaluation of research should be. Therefore it is our hope that this seminar will stimulate the search for and discovery of new research themes with achievements that contribute to society.

#### 3. Period

From August 26, 2012 through August 31, 2012 (6days)

#### 4. Venue

Sapporo : Sapporo Park Hotel(Hokkaido, Sapporo-shi) Tokyo : Shinagawa Prince Hotel, Happo-En(Tokyo, Minato-ku)

#### 5. Organization

(1) Cosponsors

Japan Side	Japan Society for the Promotion of Science
	Hosei University
Side	National Research Foundation of Korea
	Korea Advanced Institute of Science and Technology

#### (2) Organizer

1) Japan side

Name in full Hisato Kobayashi

Affiliation and position Professor, Hosei University Faculty of Engineering and Design,

#### 2) Korea side

Name in full <u>Dong-Soo Kwon</u>

6. Program: Agenda, topics, related activities (e.g., reception, excursion)

August 26,Sunday Night : Welcome reception
August 27,Monday Morning : Seminar1, 2

Afternoon : Group discussion1,2 and Seminar3, 4

August 28,Tuseday Morning : Seminar5, 6

Afternoon : Field work(Fieldwork at the Facilities for Elder People and Interview)
Group discussion3

August 29,Wednesday Morning : Seminar7, 8

Afternoon : Group discussion4 and Seminar9

August 30,Thursday Morning : Seminar10, Group discussion5

Afternoon : Move to Tokyo, Group discussion6

August 31,Friday Morning : Group Presentation

Afternoon : Special Seminar and Closing Ceremony/Farewell party

Timetable Morning Session:  $9:00 \sim 11:45$ Afternoon Session:  $13:00 \sim 17:00$  (20 :  $00 \sim 22$  : 00)

7. Lecturers and Participants

1) Number of Persons

	Lecturers	Participants	Total
Japan side	4	12	16
(Number who participated under program funding)	4	12	16
Korea side	5	15	20
(Number who participated under program funding)	5	15	20
Other persons	1	2	3
(Number who participated under program funding)	1	2	3
Total	10	29	39
(Number who participated under program funding)	10	29	39

#### 2) List

A: Lecturers

Name in full	Position / Affiliation / Institution (Country of affiliated institution)	Remarks
-Japan side		
Hisato Kobayashi	Professor, Hosei University	*
Yasuhiro Yamazaki	President, Access International, Tokyo Japan	*
Kazuhiko Terashima	Professor, Toyohashi University of Technology	*
Naoyuki Kubota	Associate Professor, Tokyo Metropolitan University	*
-Korea side Dong-Soo Kwon Sung-Chul Kang Kyung-Bin Park Sungyoung Lee Dong-Hee Han	Professor, Korea Advanced Institute of Science and Technology Director, The Korea Institute of Science and Technology Professor, Gachon University Professor, Kyung Hee University Director, Research Institute of Science for the Better Living of the Elder People	* * * *

-Other Persons		
Mounir Mokhtari	Professor, Institute TELECOM France	*

Place a check [\*] in the Remark Column for those who participated using JSPS's seminar funding.

**B**: Participants

Name in full	Position /Affiliation/ Institution(Country of affiliated institution)	Remarks
-Japan side		
Ryosuke Tasaki	Lecturer, Toyohashi University of Technology	*
Yuki Ueno	Ph.D Student, Toyohashi University of Technology	*
Sho Yokota	Lecturer, Setsunan University	*
Noe Velazquez Lopez	Ph.D Student, Tokyo University of Agriculture	*
Eriko Hiwada	Ph.D Student, Tokyo Metropolitan University	*
Jinseok Woo	Ph.D Student, Tokyo Metropolitan University	*
Romain Fontugne	PostDoc, The University of Tokyo	*
Takako Mizuoka	Ph.D Student, Japan Advanced Institute of Science and Technology	*
Jing YE	Ph.D Student, Waseda University	*
Yoichi Yamazaki	Lecturer, Kanto Gakuin University	*
Jang Min young	Ph.D Student, Meiji Gakuin University	*
Yumeko Imamura	Ph.D Student, Hokkaido University	*
-Korea side		
Chul Je Park	Ph.D Student, Korea Institute of Industrial Technology	*
Yanyan Dai	Ph.D Student, Yeungnam University	*
Man Hyung Han	Ph.D Student, Kyung Hee University	*
Yong Hoon Ji	Ph.D Student, Korea University	*
Yun Kyung Kim	Ph.D Student, Korea Advanced Institute of Science and Technology	*
Jeong-Yean Yang	PostDoc, Korea Advanced Institute of Science and Technology	*
Ham I Choi	MS Student, Korea Advanced Institute of Science and Technology	*
Min Ho Hwang	Ph.D Student, Korea Advanced Institute of Science and Technology	*
Dae Geun Park	Ph.D Student, Seoul University	*
Hyun Ju Shim	Research Engineer, Research Institute of Science for the Better Living	*
Wan Joo Park	of the Elderly People	.de
Kiwon Kim	Ph.D Student, The Korea Institute of Science and Technology	*
Young Kook Kim	Ph.D Student, Korea Advanced Institute of Science and Technology	*
Hye Yon Kang	Ph.D Student, Korea Advanced Institute of Science and Technology	*
Ji Hye Hwang	Ph.D Student, Yonsei University	*
	Ph.D Student, Yonsei University	*
-Other Persons		
Hamdi Aloulou	Ph.D Student, CNRS IPAL Singapore	*
Antoine Fagette	Ph.D Student, CNRS IPAL Singapore	*

Place a check [\*] in the Remark Column for those who participated using JSPS's seminar funding.

8. Please describe the achievements of the seminar.

(1) Achievement from academic viewpoint:

As described above in the "Purpose of Seminar", this seminar aimed not only to learn about the advanced academic research in the field of assistive technologies for the elderly, but also to provide the researchers the opportunity to examine and reconsider how the direction, method and evaluation of research should be. The seminar began with the lecture given by Mr. Yasuhiro Yamazaki, who runs a company engaged in the sales of wheelchairs and seating related products and himself uses a wheelchair. He first talked about the lack of mutual understanding between researchers and

end users as well as the importance of understanding needs, and then raised the issues about what kinds of assistive technologies would be truly useful for society.

"Through his lecture, the participants learned about the assistive technologies for the elderly and the advanced academic researches such as the development of the Smart House and Smart City. They also reaffirmed the importance of "independence support not only by using human hands but also by making full use of technologies", and the importance of "setting a higher-level purpose able to cope with the coming future age instead of a purpose which can only handle the present situation", and set their own research projects." Furthermore, through the experience of visiting the real care house for the elderly and interviewing the residents as fieldwork during the seminar, the participants could recognize the importance of "Needs Finding" and "Design Thinking" in research development concept.

It was great that from this seminar the young researchers of the next generation could understand the importance of "User-centered Design", where discussions and decision-making are carried out not merely dependent on researcher's interests or impulses but by the cooperation of researchers and people in multiple academic fields with every viewpoint and also including users. If those researchers will always continue their research activities while keeping the importance of research development concept in their minds, we can really expect their research achievements will truly contribute to the real world.

#### (2) Achievement from the viewpoint of international exchange and young researcher training:

In this seminar, those who attended lectures with different cultural backgrounds and research fields were divided into groups of 4 to 5 people, and each group was given a task for field research and group discussion etc. The group discussions and activities naturally lead to active interchanges among the group members, and those interchanges are expected to become sprouting buds for future international cooperative research. Also through their experience of having discussions and then giving a presentation together with researchers from different research institutes and with different cultural backgrounds, participants experienced training for their future participation in international research projects.

In this research field, there are a number of research themes which many countries commonly face and need to solve and international research activities in cooperation with many countries and regions are expected, while "Adjustment" to different cultural backgrounds or social systems is indispensable for such international research activities. In this sense, it was very important for the young researchers of the next generation to gain a mindset for international cooperative researches through the experience of group activities during this seminar.

We anticipate that the achievements obtained from this seminar will benefit not only for the assistive technologies for the elderly but for various researches that become increasingly necessary beyond research fields and cultural backgrounds.



Group Discussion



Presentation

# JSPS-NRF Asian Science Seminar2012 Schedule

### 1<sup>st</sup> day : August 26

17:30-17:45	Registration
17:45-18:15	Seminar 0
	"Welcome to Asia Science Seminar"
	Dong-Soo Kwon Professor, Korea Advanced Institute of Science and Technology
	Hisato Kobayashi Professor, Hosei university
18 : 15 – 18 : 30	Participants Introduction & Group Arrangement
18:30-20:30	Welcome Reception

### 2<sup>nd</sup> day : August 27

09:00-10:15	Seminar 1
	"Key Issues on R&D for Elderly/ people with Disabilities"
	Yasuhiro Yamazaki
	President, Access International, Tokyo Japan
10 : 15 – 10 : 30	Break
10 : 30 – 11 : 45	Seminar 2
	"IT for Future Health and Wellbeing"
	Mounir Mokhtari Professor, Institute TELECOM France
11 : 45 – 13 : 00	Lunch
13:00-15:00	Group Discussions 1
	"What should we do as researchers?"
15 : 00 – 16 : 15	Seminar 3
	"Creative Thinking and Creativity Development Method"
	Kyung-Bin Park Professor, Gachon University
16 : 15 – 16 : 30	Break
16:30-17:45	Seminar 4
	"Smart Clinical Decision Support System (CDSS) over Cloud"
	Sung-Yong Lee Professor, Kyung Hee University
18 : 15 – 19 : 30	Dinner
20:00-22:00	Group Discussions 2
	"How should we plan our research projects?"

### 3<sup>rd</sup> day : August 28

09:00-10:15	Seminar 5
	"Development of Assist Robot and Smart Nursing Station to Enrich Aging
	Society"
	Kazuhiko Terashima Professor, Toyohashi University of Technology
10 : 15 – 10 : 30	Break
10 : 30 – 11 : 45	Seminar 6
	"Rethinking Aging"
	<b>Dong-Hee Han</b> Director, Research Institute of Science for the Better Living of the
	Elderly People
11 : 45 – 13 : 30	Lunch
13 : 30 – 17 : 30	Field work
18:00-19:30	Dinner
20:00-22:00	Group Discussions 3
	"Brainstorming for Technologies for Super aging society"

### 4<sup>th</sup> day : August 29

09:00-10:15	Seminar 7	
	"Affective companion for elderly people: How to make emotional interaction	
	between care-giver and care-receiver"	
	<b>Dong-Soo Kwon</b> Professor, Korea Advanced Institute of Science and Technology	
10 : 15 – 10 : 30	Break	
10 : 30 – 11 : 45	Seminar 8	
	"From service robots to biomedical robots"	
	Sung-Chul Kang Director, The Korea Institute of Science and Technology	
11 : 45 – 13 : 00	Lunch	
13 : 00 – 14 : 15	Group Work	
	"Virtual Planning of Our Collaborative Research Projects"	
14 : 15 – 14 : 30	Break	
14 : 30 – 15 : 45	Seminar 9	
	"Robot Partners for Information Supports to Elderly People based on	
	Informationally Structured Space"	
	Naoyuki Kubota Associate Professor, Tokyo Metropolitan University	
15:45-16:00	Break	
16:00-17:00	Group Discussions 4	
	"Preparation of presentation"	
18:00-19:30	Dinner	

### 5<sup>th</sup> day : August 30

09:00-10:00	Seminar 10
	"Needs Finding and Marketability"
	Hisato Kobayashi Professor, Hosei university
10:00-11:30	Group Discussions 5
	"Preparing Presentation"
11 : 30 –	Move to Tokyo
18:00-19:30	Dinner
20:00-22:00	Group Discussions 6
	"Rehearsal of Team Presentation"

### 6<sup>th</sup> day: August 31

09:00-11:30	Presentation
	"On Our Future Collaborative Research Projects"
12:00-13:30	Lunch
13 : 30 – 15 : 00	Special Seminar
	Address
	In Ho KIM, Director of Center for Int'l Affairs, NRF
	Brief introduction of the activities of the Japan-Korea Joint Committee for Basic
	Scientific Research
	Hisashi Kato Director, International Program Department, JSPS
	Special Seminar
	"Hope for research collaboration of young Japanese and Korean researchers"
	Jaeho YEOM Former committee member
	Professor, Public Administration, Korea University
15 : 30 – 17 : 00	Closing Ceremony/Farewell party
	Address
	Kunio Takayanagi Former committee member
	Honorary Professor, Tokyo Institute of Technology
	Mancheol SUH Former committee member
	President, Geoenvironmental Science, Kongju National University
	Makoto Asashima Executive Director, JSPS