SDM
System Design and Management
NEWS

December 2012

Message from the Faculty

2012 Ends with a Month for Scholars and Politicians to Really Run

In the month of *shiwasu* or "running" (a Japanese way of describing December, a time when monks are busy with home visitations), to the excitement of Japanese political scientists, a big event held only once every several years is happening. The general election is on! With only ten days left until the election, I am as excited as if the World Cup, Christmas, and Olympics were all simultaneous events. The results of this election have numerous implications on many crucial issues. It is the first election after 3.11 (the Great East Japan Earthquake) and shows a high-flying formation of new parties and a record number of candidates. As such, here at SDM we ran quantitative comparative verification of the parties' manifestos and simulated election strategies for candidates in the special constituencies.

Needless to say, most voters do not share the same level of excitement about politics. On the contrary, many people seem to have an increased distrust for the rapidly-changing campaign pledges and for the politicians who vertiginously break up and regroup. Many voters criticize the policies presented as being too vague, and they find it troublesome to choose from among so many parties. As political scientists we have a duty to analyze why the political party system became so unstable and why the campaign pledges are left unrealized. By so doing we shall identify the structure of issues so as to propose innovative solutions. Without a doubt the upcoming election will generate valuable data which aid political systems analysis of this kind. By capturing political dysfunction as a problem that pertains to the structure and function of its system design, we at Keio SDM would continue to deepen our knowledge with a view to redesigning the governing systems of Japan.
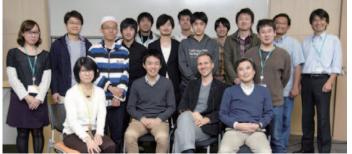
Finally, I would like to take this opportunity to express my appreciation for your kind support to Keio SDM throughout the year. We look forward to your continued support in 2013. Have a Happy New Year!

Ken Victor Leonard Hijino, Associate Professor
Graduate School of System Design and Management

News

TOPIC 1

Introduction to Model-Driven System Development: An Intensive Course

Group photo with participants (front row from right: Professor Nishimura, Dr. Balmelli)

Dr. Laurent Balmelli and Professor Hidekazu Nishimura taught an intensive course entitled, "Introduction to Model-Driven System Development," in C3N14 Room on the third floor of the Collaboration Complex from October 24 to 30. It was a part of the Global Center of Excellence (GCOE) Special Lecture Series. About twenty individuals registered for the course and learned how they could use a model-based approach to design and develop elaborate products and services. Model-driven system development employs Systems Modeling Language (SysML), which describes a model of a system. Model-driven systems development illustrates a system's structures, behaviors, requirements, and constraints so as to help organize the thoughts of designers and developers, thereby enabling a smooth and efficient system engineering process.

Participants in the intensive course learned the basics of system engineering and examined common processes of product development, such as requirement management, use-case analysis, design-change management, and trade-off analysis, from the perspective of model-based approach in accordance with their own themes. Dr. Laurent Balmelli introduced a case regarding rice cultivation as an example of his work on technology investment and business in Africa.

TOPIC 2
Real-Time Communication with Astronaut Hoshide on the International Space Station (ISS)

Astronaut Akihiko Hoshide answering questions asked by the participants

Real-time communication system set up at different sites

Keio SDM successfully communicated in real time with Astronaut Akihiko Hoshide (Keio alumnus) who is staying on the ISS for an extended period. Two concurrent events were held for this occasion at the Collaboration Complex on November 6.

In the CDF room on the third floor the real-time video stream from the ISS was converted from 2D to 3D and screened as pseudo 3D on a 180inch 4K3D display. It was broadcasted simultaneously via live stream at Fujiwara Hiroshi Hall, at a temporary planetarium, as well as at various sites set up at Tokyo University, at Kyoto University, in Setagaya Ward of Tokyo, and in Minamisanriku (a tsunami affected town in Miyagi prefecture). All of these sites were mutually connected, realizing a parallel-reality in space communication. In the CDF room an event entitled, "Information Technology and Space Technology," was held; and

Professor Tetsuro Ogi, Associate Professor Yoshisuke Tateyama, Yoshiya Fukuda of JAXA, Satoko Otsuka (SDM doctoral fellow), and Executive Advisor Taketoshi Hibiya of the SDM Research Institute lectured on the information technology used for the ISS and for the real-time communication event. Real-time communication began at 22:00 and lasted for approximately thirty minutes. Keio SDM students as well as primary and secondary students from Setagaya ward and Minamisanriku town exchanged communication with Astronaut Hoshide using questions they prepared beforehand.

At Fujiwara Hiroshi Hall, of a different vein, Keio SDM and Think the Earth co-hosted the sixth session of the Space Lecture Series, "Space School," for which leading experts are invited to speak about the ISS and future of space development in an easy-to-understand manner. For the sixth session lectures and a panel discussion were organized with Associate Professor Naohiko Kohtake, Mr. Soichi Ueda, the representative of Think the Earth, Executive Advisor Yoshiaki Ohkami of the SDM Research Institute,

Associate Professor Hajime Yano of JAXA, and Professor Akihiro Kubota of Tama Art University. Despite an unexpected switch interruption between the ISS and the data relay satellite, NASA, JAXA, and other institutions concerned kindly accommodated the change in the time schedule. As a result the real-time communication went into overtime. More than three hundred people participated in these events, which was also broadcasted on Ustream, enabling more than six hundred individuals to watch the events in real time.

"Information Technology and Space Technology" Ustream Archive:
▶ http://www.ustream.tv/channel/keiosdm1 (in Japanese)
"Space School " Ustream Archive:
▶ http://ustream.tv/channel/keiosdm2 (in Japanese)
Yomiuri Online:
▶ http://www.yomiuri.co.jp/kyoiku/special/astronaut/as20121107_01.htm (in Japanese)

TOPIC 3
Symposium Commemorating the Establishment of the Management Design Center

Panel discussion

A symposium entitled, "Human Development for Overseas Projects: Competitive Global

Business," was held at Fujiwara Hiroshi Hall on November 13 to commemorate the establishment of the Management Design Center as a new educational research facility at the SDM Research Institute.

At the symposium Mr. Takashi Kubota, President and CEO of Chiyoda Corporation, gave a keynote speech entitled, "Human Resource Requirements for Project Management: Example of Large-Scale Energy Plants Overseas." Subsequently Japan International

Cooperation Agency (JICA) and Yokohama City presented on the theme, "Environmental City and Infrastructure Overseas Development," using examples in order to aid in understanding.

A panel discussion on the significant role of universities in human development concluded the event. It reaffirmed that there are growing expectations for Keio SDM's concrete contribution towards Project Management education.

TOPIC 4
Completion of Project Manager Leadership Training

Participants listening attentively to the lecture

This year's Project Manager Leadership Training, which began with the above-mentioned symposium, ended on December 6 with a five-day camp (November 13-15 and December 5-6).

This is the fourth year in which this training has been conducted. As in the past, Associate Professor Tetsuya Toma and Part Time Lecturer Yoshiyuki Takahashi took part as Coordinator and Chief Trainer respectively. The training this year was the most popular thus far, with a total of twenty-one participants, including thirteen individuals from various fields, four auditing students, and seventeen students from Keio SDM, out of which four are currently working.

Beginning this year, a workshop on combining system

thinking with design thinking was added to the training program, making it a more distinctively Keio SDM program. The presentation session, which was meant to enhance communication ability essential for leaders, lasted late into the night. Having gone through such adversity together, participants from different industries bonded with one another. Participants, pledging that they would keep in contact even after the training at the completion ceremony, returned to their own workplaces. An E-learning system was introduced this year for the purpose of post-training follow up.

TOPIC 5
SDM Articles in Fuji Sankei Business-i.

Newsletter of Fuji Sankei Business-i

Keio SDM published a series of articles in Fuji Sankei Business-i. from October to November 2012 with the aim of appealing to working people. The article on October 16 featured a dialogue between

Mr. Toshiya Miyoshi, Corporate Officer and Head of Human Resources and General Affairs at Kirin Holdings, and Dean and Professor Takashi Maeno of Keio SDM on the theme : How to Foster Innovative Human Resources Capable of Changing Society.

In addition, Associate Professor Tetsuya Toma, Professor Hidekazu Nishimura, Project Professor Mikako Hayashi, and Professor Ryuichi Teshima contributed one-page articles entitled, "Fostering Leaders Who Can See the Trees and the Forest Simultaneously," "The Capacity to Act Beyond

Borders," "The AGRI (Agricultural) Laboratory," and "Designing the Cornerstone of the Public" respectively.

A reporter from Fuji Sankei Business-i. took part in one of the extension lectures, Keio Innovative Design School (Open KiDS), which was held from October 7 for four weeks, and covered participant feedback and reports, resulting in an eight-page feature article on the Open KiDS.

The link to the articles can be found on the SDM's Web page news.
▶ http://www.sdm.keio.ac.jp/2012/12/10-095735.html (in Japanese)

TOPIC 6

Extension Lecture: The Future of Design and Management Vol. 2

Participants listening carefully to the case example

Keio SDM held an extension lecture entitled, "The Future of Design and Management Vol. 2" on November 6. During the lecture President

Masayuki Habuki of Wakyo Shoten spoke about the process of transforming ideas to concepts and then to solutions. He focused on how to identify an intrinsic value and turn it into a business which contributes to local revitalization. Taking his current work on *sake* brewery restoration as an example, he explained the ways in which modern eyes can be incorporated into the regeneration of traditional industries. Participants showed a keen interest in his presentation on this process, from the stage of finding the intrinsic value

to that of branding. His explanation was very clear, having the aid of pictures and concrete data. Being an entrepreneur who has been catching people's eyes recently, Mr. Habuki's presentation generated lively discussion, with the question and answer session going into overtime. The lecture received positive feedback from the participants, including comments such as, "The lecture provided a valuable and concrete example of business development involving localities, which was very distinctive of Keio SDM."

TOPIC 7

Lecture by Associate Professor Ken Hijino & Keio SDM Information Session

A lecture by Associate Professor Ken Hijino entitled, "Good Politics? From Political Situation, Policy, and System to System Design for the Structure of Government" was held together with Keio SDM's Information Session in the South Building of Mita Campus at 6 p.m. on Wednesday, November 7. More than forty individuals interested in Keio SDM came for the event.

In his lecture Associate Professor Hijino posed a question: "What makes for good or bad politics? Is it

the personal qualities of politicians? The detail of each policy? Or how politics is practiced?" Taking the cases of Sweden and the UK as examples, he introduced various processes and rules used to reach democratic decisions. Participants then explored how the system (election system, parliament administration, legislation process, and budget compilation) should be designed in order to make political process functional. Participants were also asked to express their opinions regarding the role of politicians and political parties

by filling out a questionnaire and then answering ten questions. He concluded the lecture by pointing out the blind spot of the "political system reform" in Japan and by emphasizing the importance of reform plans from the system's perspectives, the essence of Keio SDM.

Subsequently, Associate Professor Tetsuya Toma gave a briefing on Keio SDM and answered questions individually. The event ended on a high note.

TOPIC 8

The Know-How of Social Innovation: Seminar on Portfolio Program Management

A full-day seminar on portfolio program management was conducted for alumni and current students of Keio SDM on Sunday, November 11. While Keio SDM students learn project management based on PMBOK, real work situations often require them to manage multiple projects simultaneously. The concept of program management

is thus useful for managing multiple related projects. In addition, the portfolio management guides what kind of projects and programs should be organized in which way according to the corporate strategy. The seminar was facilitated by a lecturer from the Japan Chapter of the Project Management Institute (PMI). With almost twenty participants, it was conducted in

a workshop style using a classical music event, "La Folle Journée," as a material. Keio SDM alumni who attended the seminar commented that they would like similar seminars to be organized in the future as it offered a great opportunity to gain new knowledge.

TOPIC 9

Extension Lecture by Professor Stoewer: Space Applications—Utilizing Space

Professor Stoewer speaking at the lecture

Professor Heinz Stoewer taught an extension lecture entitled, "Utilizing Space," in the afternoon of November 13. He first explained about the current situation and future prospects of global space development, focusing on its application to the communication service as well as to geographical information and surveillance service. After the situations were grasped for each field, a discussion was held on the issues and prospects concerning

the utilization of space. Not only those engaged in space development from the national agencies, manufacturers, and service users, but also those in unrelated fields attended the lecture, making the discussion lively and with various opinions.

Participants commented that they found this kind of discussion held at a university among diverse stakeholders extremely useful and that they would like similar seminars organized in the future.

TOPIC 10

The Future of Dialogue and Design Vol. 6: The Future of Social Design

Presentation by Mr. Kanematsu, Chief Editor of greenz.jp

Since June of 2012 the SDM Research Institute, together with the Center for Education and Research of Safe, Secure and Symbiotic System Design of the Global COE Program, has been organizing a series of extension lectures, "Future Sessions", on the subject of "The Future of Dialogue and Design."

The sixth session was held on Wednesday, November 14 on the theme of "Social Design" by inviting Mr. Hima Furuta, President of Umari Inc. and Mr. Yoshihiro Kanematsu, Chief Editor of greenz.jp.

Mr. Furuta, who defines social design as creating something of new value by viewing it from a different angle, introduced various cases of local revitalization in which he has been involved. Mr. Kanematsu, who, on the other hand, defines social design as creating an innovative mechanism to address social problems and to create new values simultaneously, presented an innovative project that he covered as a part of greenz.jp. The session was very popular with more than eighty participants, who actively asked questions and contributed their comments and suggestions. The level

of satisfaction was high among the participants with many positive comments, such as this: "I feel inspired and motivated to start a project of my own."

The Future Sessions will continue to be held on a monthly basis until March of 2013. Please visit Keio SDM's homepage (http://www.sdm.keio.ac.jp/) if you are interested in attending the Sessions.

Presentation by Mr. Furuta, President of Umari Inc.

TOPIC 11 Completion of the Design Project 2012

Students making their final presentation

The final session of the Design Project 2012, one of the required subjects of Keio SDM, was held on November 24 and 25. Twelve groups presented their project results. Each student group selected a theme proposed by a company or a local government body and worked collaboratively with the proposer.

This academic year the three-phase approach was introduced to the Design Project. Students learned ways of thinking, methodology, and methods in the first Learning Phase (June-July). They then practiced the methods in the Active Learning Phase (August-September). Finally, they explored the specifics and details of the projects and/or services related to their themes in the Real Innovation Phase (mid September-early November). The new approach seems to work effectively, as we had many high-quality proposals this year.

At the evening gathering on November 25 proposals of excellence were awarded: the Maeno Prize went for Infrastructure Innovation Group A, the Shirasaka Price for Tsuneishi Group A, the Haruyama Prize for Yokohama City Group A, the Yasui Prize for Yokohama City Group B, and the Spirit and Guts Prize for Toshiba Group B.

TOPIC 12 Technical Entrepreneurship Lecture by Professor Duncan Moore

Professor Moore commenting on students' presentation (left)

The annual lecture on technical entrepreneurship by Professor Duncan Moore of Rochester University was held for three days on November 27, 28, and December 1. As there are many international students this year, the lecture held in English was attended by more students than in previous years. Professor Moore covered a wide range of topics, from marketing to financial matters and intellectual property, using the company that he started up as an example.

As an exercise students worked in pairs and presented a business start-up based on new ideas. Various business proposals were formulated based on multiple perspectives, following the principle of Keio SDM.

Participants, Associate Professor Toma (front left), and Professor Moore (2nd from left)

TOPIC 13 The Hiyoshi Research Portfolio and Hiyoshi 3.0

Participatory workshop

The Hiyoshi Research Portfolio 2012 was held on November 9 and 10 with a view to disseminating the outcomes of educational research activities of the faculty members who belong to Hiyoshi Campus. Associate Professor Naohiko Kohtake and Keio SDM students led the organization of a three-part workshop entitled, "Hiyoshi 3.0: Turn Campus into a Canvas," which is to explore how Hiyoshi Campus should be. In the first part, "Reflecting Back the Hiyoshi Vision," Professor Emeritus Takeshi Yukawa and Professor Isao Hada of the Faculty of Economics introduced the "21st Century Campus Vision" which used to be debated on Hiyoshi Campus in the late 1990s. In the second part, "The Continuation and Linkage of the Unknown Everyday—Hiyoshi Campus Tour," participants went on a tour to see various activities that are carried out in the spacious premises of Hiyoshi Campus with an intent to discover possibilities and issues concerning Hiyoshi Campus. Finally in the third part, "The Participatory Design Workshop," participants were asked to cooperate with one another in order to generate ideas regarding new ways of utilizing Hiyoshi Campus based on the knowledge and points gathered in the first and second parts. Participants used some idea-generating methods, such as "IntroMatrix," "brainstorming," and "scenario graphs," to generate ideas in groups and shared the results of the group work using the "Elevator Pitch" technique. Subsequently during the "Gallery Walk," each participant filled out a sheet entitled, "Hiyoshi 3.0 Project Plan," which was posted on the wall in order to discuss and review innovative and realizable ideas. The event deepened the interaction among the different teams and led to the generation of more than one hundred innovative ideas.

Hiyoshi Research Portfolio 2012 Report:
▶ http://hrp.hc.keio.ac.jp/report2012.html (in Japanese)

Hiyoshi 3.0 version campus map:
▶ http://hrp.hc.keio.ac.jp/img/hrp2012/HRP2012_campusMap.pdf (in Japanese)

TOPIC 14 The Fifth Session of the Lecture Series on Space: "Utilizing Space: Future Design by Space Innovation"

Participants who are working together as employees of SpaceInnovative.com

A lecture series entitled, "Utilizing Space: Future Design by Space Innovation," was held at Shibuya Hikarie 8/COURT on November 4. During his lecture Associate Professor Naohiko Kohtake explored together with participants how to utilize accomplishments in the field of space research in order to generate innovations. The lecture was followed by a talk session, in which Mr. Seiji Kamiyoshi of JAXA, Katsuhiko Ono of Hakuhodo DY Media Partners Inc., Professor Akihiro Kubota of Tama Art University, and Mr. Taichi Furuhashi of MAPconcierge Inc., introduced innovation-related activities at JAXA, the Space_Creative_Space Project (using an ultra-small satellite), "ARTSAT" (satellite art project), and the International Space Apps Challenge (using space data). Building on the lecture and the talk session, participants worked collaboratively to generate ideas for innovations utilizing space. The lecture was facilitated by Ms. Atsuko Saito of KOKUYO Co., Ltd. who used specially-made "space cards" to break the ice and generate ideas. Each participant prepared a short project proposal pretending to be a staff member of a hypothetical company, "SpaceInnovation.com." The session concluded with participants sharing their ideas.

The "Space cards" used for the collaborative work

Note Lab profiles do not appear in this issue.