

AJCE

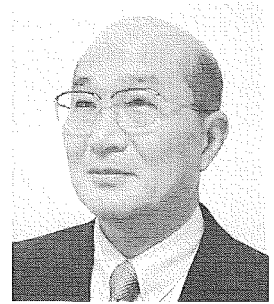
NEWS LETTER

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AJCE's past 30 years

Tokuji TOMARU, Dr. Eng.
President, AJCE



It was in 1974 that AJCE was established and became a member of FIDIC. Since then, adhering to the principles of independent and impartial position in providing professional services, AJCE, the only association representing Japanese consulting engineers in FIDIC, has been making efforts for consulting engineers in Japan to develop their capacities and to encourage their activities gaining the support of FIDIC.

In 1991, FIDIC annual conference was held in Tokyo, which is the first one held in the East Asia and then about 650 attendees enjoyed oriental culture and Japanese food.

Last year, in 2004, we celebrated AJCE's 30th anniversary with attendances of the FIDIC President Mr. Richard A. Kell and all members of FIDIC executive committee. Then we held a memorial seminar on consulting engineers' future and their selection method, in which we have got confidence in bright future of the consulting industry. Moreover we were very pleased to be able to publish AJCE's 30 years memorial record by CD-ROM.

Looking back the past 30 years, AJCE, I think, has been mostly involved in and focused on how to build and promote the consulting engineers'

skill and capacity in our country, which will become useful and effective in the field of the international engineering activities. We have also held many seminars and symposiums to disseminate FIDIC principles by introducing FIDIC publications for not only consulting engineers but also the Japanese contractors working overseas.

But nowadays the situation surrounding consulting engineers are rapidly changing. Social and economic globalization is progressing. The world is becoming borderless after WTO and/or FTA were established. Even if domestic consulting engineers' activities have been limited so far to some extent due to historical development reasons, their roles are expanding and changing to be more important. They are expected to play major and responsible roles in diversified areas as much as international consulting engineers do in the world.

The time is coming when, based on our 30 years experience, accumulation of know-how and very strong net work with FIDIC member associations in the world, AJCE will go into more powerful action and take the initiative in the changing world.

AJCE, 30 Years and More

Akihiko HIROTANI

Vice President, AJCE

Chair

Standing Committee for 30th Anniversary Activities



The Association of Japanese Consulting Engineers (AJCE) was established in April 1974, and joined FIDIC in October 1974. AJCE has steadily developing its domestic and international activities and was approved by The Science and Technology Agency of Japan (currently, Ministry of Education, Culture, Sports, Science, and Technology) as an aggregate corporation in August, 1977.

AJCE's 30th anniversary was celebrated in May 2004, attended not only by engineers of Japanese Consulting industry but also by guests from overseas and FIDIC Executive Committee.

It is only proper, taking this opportunity, to make an article of the occasion and let all the people concerned know that AJCE had been contributing to the development of this important industry and also devoting to the capacity building in many other countries through FIDIC activities.

1. AJCE and Japanese Consulting Industry

Japanese engineers had identified demand for consulting profession in Japan soon after the redevelopment activities had started since the middle of 1940th. The Institution of Professional Engineers, Japan (IPEJ) was established in 1951, inviting those who lend professional services to satisfy the demand. Members of IPEJ come not only from consulting industry but also anybody who is qualified, working for construction companies, manufacturers, trading companies and many other industries.

The aims of IPEJ are mainly divided into qualification of engineers and enhancement of engineering professional activities.

Japanese engineers became busier as the redevelopment of their country continued while the economic activities had also started picking up speed. Consulting industry, particularly, had found the overseas need for their professional services and

started developing their activities to satisfy the demand. They required information to develop the activities overseas and wanted to collaborate with FIDIC, a federation connecting the entire consulting industry worldwide.

AJCE was established to become a sole doorway for Japanese consultants to the outside world to let their capability be recognized by outside of Japan and also to let outside information flow through its activities.

2. Foundation of AJCE

It is well known that IPEJ had a very strong intention, from the very start of its establishment, to become a member association of FIDIC. It has sent out fact finding missions to FIDIC and annual conferences as early as in 1960, only 10 years after the establishment of IPEJ.

By the time of IPEJ's first contact with FIDIC, there were already member associations of FIDIC from 23 countries. IPEJ felt very much as an outsider from the circle of world consultants without becoming a FIDIC member association. Repeated approaches by IPEJ to FIDIC, however, did not make their effort paid for the next ten years.

Mr. Frijlink, the Managing Director of FIDIC at the time, made a visit to IPEJ in 1973. Prior to this visit, Mr. Fitt, the President of FIDIC at the time, made a report to ECM, in 1972 at Amsterdam. The report made clear what had been preventing the entry of IPEJ to FIDIC. FIDIC code at the time did not accept any involvement of engineers apart from consultants. IPEJ had private membership for anybody who is duly qualified by the national regulation, including not only consultants but also constructors, manufacturers, trading businesses and others. Mr. Frijlink clarified this hurdle to IPEJ.

AJCE was established by inviting qualified engineers who were mainly in the consulting profession. Efforts by many consulting engineers finally realized.

3. Activities in 30 years

AJCE aims to enhance the position and quality of private consulting engineers (CEs), who lend professional services to contribute to the enhancement of human security and welfare.

In 2004, AJCE celebrated its 30th anniversary in Tokyo, inviting FIDIC board members as well as CEs in Japan.

During these 30 years, AJCE has been conducting various activities to achieve the purpose of its establishment.

AJCE participates in the General Meetings of FIDIC held every year in various countries and promotes the international exchange with CEs of other countries.

AJCE also participates in activities of FIDIC Member Associations in the Asia and Pacific Region Conference (ASPAC) and plays important roles in promoting regional activities and exchange information between potential member countries in the region.

AJCE maintains contact with international organizations including the World Bank, the Asian Development Bank, the United Nations, and various national agencies or organizations. AJCE keeps bilateral relationship between FIDIC member associations and has signed MOU (Memorandum of Understanding) with some of them. MOU has resulted to an "alternate exchange program of young professional engineers", for instance.

Lectures and seminars held by AJCE give the latest information and data on CE activities around the world. "The AJCE bulletin (in Japanese)" and "The News letter (in English)", first issued in 1977, are published and distributed inside and outside of Japan.

AJCE collects current information related to CE activities and overseas contractual standards and publishes their Japanese versions.

The articles of AJCE were partially revised several times during these periods for the purpose of promoting and broadening activities of AJCE member engineers.

Contributions of AJCE to FIDIC activities have been growing during these 30 years. Some of Japanese prominent CEs were elected FIDIC board members. Many of AJCE's CE members joined the FIDIC Standing Committees activities.

Establishment of "Young Professional Forum"(YPF) was initially proposed and activated by the young CE members of AJCE.

AJCE has been tackling several issues for 30 years, and this year it embarked upon another step into the challenging future.

4. FIDIC Annual Conference in Tokyo, '91

In consideration of the 10th anniversary of AJCE, FIDIC decided to hold a 1987 General Assembly Meeting in Kyoto, Japan at the assembly in June 1983 in Florence in Italy with the attendance of Dr. Hiromu Tanabe, the president of AJCE at the time.

AJCE set up a standing committee and made arrangements for the conference. But fearing considerable decline of attendants due to rapid rising of yen value, it was suddenly decided in May 1986 to postpone the conference in Japan until 1991. Further in December 1989, it was decided to hold the conference in Tokyo since the access was easier for domestic and international attendants.

Though it required tremendous amounts of money and time for the conference preparation under the leadership of Mr. Tatsuo Hori, the president of AJCE at the time, the conference was successful with deep impression on the attendants. Mr. Steeve C. Gentry, the president of FIDIC quoted in the opening address that the conference was prepared with "perfection and delicate consideration that are the characteristics of Japanese people"

The conference was briefly as follows:

- | | |
|-------------|---|
| Date: | September 15 to 19, 1991 |
| Venue: | Keio Plaza Intercontinental Hotel (Shinjuku, Tokyo) |
| Attendants: | 490 persons from 39 countries (104 Japanese persons among them), and 142 Japanese co-sponsor persons |
| Theme: | "Harmonization between man and environment"
with Mr. Allen M. Acheson as the chairman |
| Speech: | 1. Project and Environment by Mr. Kazunobu Onogawa (Japan)
2. Harmonization of Project Cycle and Environment by General Henry J. Hatch (USA)
3. Consideration on Design Process and Environmental Issues by Mr. Ernst Hofmann (Switzerland) |
| Workshop: | 11 Section Meetings
[TRANSFER, HAZARD, RECYCLING, ENERGY, PUBLIC, DEVELOPMENT, LAW, EDUCATION, QUALITY, PROMOTION, SECURITY] |
| Symposium: | 1. Panel discussion
2. Reporting on committee by the president of FIDIC |
| Seminar: | Finance and procurement method of EBRD (European Bank for Reconstruction and Development) |

Japan's Official Development
Assistance Program

Social Events: Tours, Leisure evenings, Post
conference tours

In the opening ceremony, Mr. Takeo Morimura, vice-president of AJCE at the time, gave the opening address, Mr. Hiroshi Mori, the president of AJCE at the time, declared the opening of meeting, His Imperial Highness Prince Hitachi gave a welcoming address, the Governor of Tokyo (Mr. Takayoshi Kaga, deputy governor by deputy) gave a welcoming address, and Mr. S.C. Gentry, the president of FIDIC at the time, gave the opening remarks.

His Imperial Highness Prince Hitachi gave the address "I hope that appropriate advices are prepared with good surveillance of environmental issues being faced by this country".

Unfortunately it was a day of mighty wind and heavy rain due to a typhoon approach, the conference was successfully closed with active involvement of many people from AJCE, public and private agencies, and many countries.

5. AJCE in Future

The consultants' industry has prospered during the last 30 years of AJCE and is expected to continue to do so in the future, with further roles, functions and assignments. Environment surrounding this industry is ever changing in every means and so shall be the industry itself.

It has been made very clear by now that AJCE has been contributing to the consulting industry in Japan and overseas in many ways, using the strong tie the association had established with FIDIC. AJCE is expected to play a stronger role in the world consulting industry in the future also, meeting the various needs and demands in an ever changing society and environment to which consultants provide services.

Roles of consultants are expected to keep changing since the society demands safer, comfortable and sustainable environment. There is a case of world population as an example, since it will be one of most serious problems to tackle at.

The World Bank released its own projection of world population in total as well as in areas and countries. The world population is expected to grow approximately two times from present level within

next hundred years or so. This sort of projection may prove to be quite accurate since the analysis on population is said to be one of most developed kind. Large explosion of population would cause various kinds of burden to human for food, water, environment, energy, housing, etc. Population growth is not evenly spread among countries. Rich countries would grow richer and poor countries would become much poorer. There are already some scholars wondering whether the earth could really support the whole population.

Increased population would consume more energy and create more heat. Natural energy resources such as oil, coal, etc. are running out of stock. New mechanism to create energy without consuming natural resources has to be developed and established in affordable cost range to people. Engineers are working fully busy and so should be the consultants.

What consultants can do to tackle this kind of task. Discussions are taking place about sustainable development, foreseeing population explosion to protect not only human beings but also the precious Earth. Balanced development in sustainable condition is necessary and new assignments for consultant will be found.

AJCE shall be well prepared to the changing role of consultants and find new means to stay as a central player in the domestic as well as world consultants industry. Collaboration with FIDIC is a key mechanism and AJCE shall continue contributing to the well development of FIDIC.

Remarks ;

One wonders always, facing a 30 year long history, whether enough was said or more have to be said. It is obvious that only a few pages are not enough to make a whole record of AJCE. Many people have contributed voluntarily to the development of the association as well as the enhancement of CE industry in Japan and worldwide. Each one of them deserves a few lines.

AJCE, therefore, is almost finalizing a book in CD-ROM to record the 30 year history. This book, only in Japanese, shall be available to anybody after the GAM of May 2005. Messer Endo, as the committee chairman for the preparation of this book, Sakuma, Tajima, Yamada, Kobayashi, Tomaru and many others have set aside plenty of time to devote themselves to the task.

30 Years at a Glance

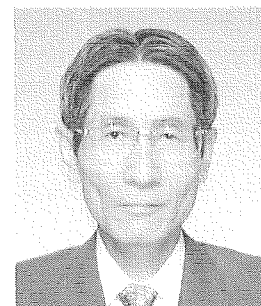
Year	Chairman(*1)	Event (AJCE)	FIDIC's annual conference
1974		Establishment and entry into FIDIC	
1975	Hiroshi TANAKA	Commemorative conference at Tokyo	
1976	Yasuo KOUNO	Assignment to Middle East as a member of Japanese business circle's mission	
1977		Becoming a corporate juridical person	
1978	Yasuo KOUNO	Seminar on nurturing engineering managers	
1979		Special training course on project contracts. The first 'Salon'	Copenhagen
1980	Yasuo KOUNO	A proposal to JICA on assignment services of experts	San Francisco
1981		Commemorative seminar of issuance of Japanese version of FIDIC's Consultant Contract	Berlin
1982	Hiromu TANABE	A symposium on FIDIC's Plant Contract	Singapore
1983		A symposium on overseas projects	Florence (Italy)
1984	Hiromu TANABE	Discussions "CE registering for the world and possibility of CE services in China"	Rio de Janeiro
1985		Training course "Explanation on technical cooperation program"	Vienna
1986	Hiromu TANABE	A conference on grouping and revitalizing private enterprise members	Oakland
1987		Training course "Possibility of engineering cooperation between Japan and U.S."	Lausanne
1988	Tatsuo HORI	Seminar "Guidance on civil works contract basing new FIDIC's version"	Dublin
1989		Receiving a Chinese mission of economy and construction	
1990	Hiroshi MORI	Working group "Outline of worldwide environmental problem"	Oslo
1991		FIDIC's annual conference in Tokyo "Harmonization between man and environment"	Tokyo
1992	Hiroshi MORI	Seminars "FIDIC's environmental policy" and "World Bank's sustainable development"	Madrid
1993		Seminar "Johannis de Rijke and George Arnold Escher brought modern civil engineering to Japan"	Munich
1994	Masao UMEDA	Discussions "A personal opinion of grasping worldwide environmental problem"	Sydney
1995		Seminar "Snow, ice and environment on earth"	Istanbul
1996	Kazunari MATSUNAGA	Seminar "Quality control of public works and ISO9000/14000"	Cape Town
1997		Exchange training between Japan and Australia	Edinburgh
1998	Yumio ISHII	Annual lecture meeting "PFI, Japanese version"	Edmonton
1999		Issuance of Japanese version of new FIDIC Contracts	The Hague
2000	Yumio ISHII	Seminar on new FIDIC's Contracts	Hawaii
2001		Annual lecture meeting "FIDIC's contract guide"	Montreux
2002	Tokuji TOMARU	Training course "Selection of Consultant"	Acapulco
2003		Training course "New business model on saving energy"	Paris

*1: The AJCE's chairman's tenure of office is two years from May to May.

AJCE Seminar 2004 Report

Yoichi TAKEMURA

Vice-chairman
Professional Training Committee, AJCE



Theme: "How The Selection of Consultants Should be applied? - To Discuss QBS aiming at Public Interests, through Case Studies in Japanese Market and Overseas "

1. Introduction

In May 2004, AJCE held a Symposium commemorating its 30th anniversary in Tokyo. Since the FIDIC executive committee convened its regular meeting in Tokyo in the same period of time, all the executive committee members had their opportunities to participate in this symposium.

Mr. Richard Kell, President of FIDIC, addressed his keynote speech entitled "Consulting Engineering - Challenges and Solutions".

Mr. Gregs G. Thomopulos, FIDIC Executive Committee member, from the US, made his presentation of "Quality-Based Selection (QBS) - Procurement of A/E Services in the United States", as one of the Panelists in the Panel Discussion of the Symposium.

Their presentations brought about big interests and concerns among not only the audience of the symposium but also people concerned with the construction of public works through articles reported in some newspapers published in the construction industry community.

Further information/data were desired, especially case histories on QBS and QCBS in the domestic market and abroad.

Having these circumstances in mind, the Professional Training Committee (PTC) of AJCE, which is responsible for implementation of annual seminars, proposed seminar topics in 2004 to be "QBS" in order to follow-up the Symposium discussions last May.

Through investigation of case histories on QBS and

QCBS, it was learned that the website of American Council of Engineering Companies (ACEC) is accumulating a lot of information/data.

When searched with a keyword of QBS, we found 185 pieces of information/data as of August 2004.

About 15 pieces of documents were selected for materials of the coming seminar by translating into Japanese.

It was also learned that the Japan Civil Engineering Consultants Association (JCCA) was initiating its studies on QBS and QCBS for promotion of the most desirable selection method for consultants.

The background of this initiation seemed to be some serious concerns, held by some members of the Diet, over the qualities of public works projects implemented by the national and local governments. Their concerns resulted in proposing a bill for "Procurement of Construction Services in securing their qualities for Public Works".

JCCA, AJCE and other two associations of Infrastructure Development Institute Japan (IDI) and Engineering Consulting Firms Association (ECFA) have jointly issued a pamphlet on "Selection of Consulting Engineers in Developed Countries" in order to promote sound capacity building and social status of Consulting companies of Japan. This pamphlet was introduced in the seminar.

2.Seminar Program and Speeches

The seminar was held in November 2004 at the conference room of Nippon Koei Co., Ltd. in Tokyo.

The program consisted of the following sessions:

- Opening address by Dr. Tomaru, President of AJCE
- Speech "Review of Symposium for 30th Anniversary of AJCE" by Mr. Kariya, Chairman of FIDIC Policy Promotion Sub-committee of PTC
- Speech "Case Histories of QBS in the US" by Ms.

Yokokawa, Member of QBS Sub-committee of International Activity Committee (IAC)

- Speech "Introduction on Situations surrounding QBS in Japan" by Mr. Kawakami, Chairman of QBS Sub-committee of IAC
- coffee break
- Free Discussions, Facilitator Mr. Takemura, Vice-chairman of PTC
- Topics: "AJCE's Scenario to Actualize QBS" by Mr. Kariya
- Topics: "How does QBS work to save Design cost and Life-cycle costs for Projects?" by Mr. Takemura
- Topics: 4 questions about QBS for discussions
- Summary remarks by Mr. Hatao, Chairman of PTC
- Closing remarks by Mr. Hirotani, Vice President of AJCE

In his Opening address, Dr. Tomaru stated that: Consultant's roles have become very important in this era to develop various infrastructures to meet nation's real needs in Japan and therefore, selection of such Consultant should be quality-based. Actually, the so called "Proposal method" in Japan has been adopted by the public clients in recent years and this method is considered to be QBS. The bill for "Procurement of Construction Services in securing their qualities for Public Works" is within the frame of the Accounting law, therefore, is considered QCBS. Anyway, since some preferable situations for Consultants are arising, constructive discussions and fruitful outputs are desired in this seminar.

Mr. Kariya referred to, among others, the statement by Mr. Kell saying that: "The problem of selection on price has been with us for many years now in many Western countries, and is also prevalent in developing countries, Shoddy, poor quality and sometimes unsafe work has been the result."

Ms. Yokokawa talked about QBS in the US, based on Mr. Thomopulos' presentation and information/data from ACEC website, and interestingly referred to the policy of the Brooks Act: "The Congress hereby declares it to be the policy of the Federal Government to publicly announce all requirements for A/E services, and to negotiate contracts for A/E services on the basis of demonstrated competence and qualification for the professional services required and at fair and reasonable prices." which was quite impressive.

Mr. Kawakami, who presented the situations in Japan, pointed out the following issues as essential:

- The Consultancy market, consisted of approx.

4,000 firms, in Japan has been declining due to decreased public investments from ¥35.2 trillion in 1995 to ¥20.4 trillion in 2004. Competitions are fierce, as indicated in data in 2003 showing awarded contracts by the Ministry of Land, Infrastructure and Transport, below 70% of the usual prices consist of 10% of the total contacts.

- Clients in Japan basically adopt three types of contract methods; Lowest Price Conforming Method (CBS), Proposal Method (QBS) and Price Negotiation.
- QBS has been increasing in national government projects by Ministry of Land, Infrastructure and Transport. In 2002, the shares of QBS indicated 10% of the total projects and 25% of the total contract price on the other hand CBS consisted of 50%, and 65%, respectively.
- However, the shares of QBS in local governments projects have been very small, 0.5% of the total projects and 1% of the total contract price. To the contrary, CBS consisted of 80%, and 90%, respectively.
- Reasons for little applications of QBS in local governments projects are considered to be shortages of staff for QBS proceedings in the local governments, and some other factors.
- The advantages learned through QBS are "deepened understanding of the jobs", "optimized team formation for the job, and suitable and capable engineers and/or experts assigned" and "objectives and/or tasks made clear through discussions and negotiations prior to commencement of the job and thereafter, speedy and smooth execution of the job".
- ACEC and other associations should promote "expanded application of QBS", "more technical-oriented evaluation in QCBS" and "useful supports for staff of the local governments".

3.Free Discussions

At the commencement of the free discussion, Mr. Kariya explained about "AJCE's Scenario to Actualize QBS" which was suggested by Mr. Stanley Kawaguchi, FIDIC former Executive Committee member, in the free discussion session of the Symposium in May 2004 and adopted by AJCE as a guide-frame:

- (1) To establish a special committee to handle and promote QBS in AJCE
- (2) To collect information/data regarding QBS issues and analyze for measures to take
- (3) To establish clear AJCE's position on QBS
- (4) To strengthen relationships and collaborations with other relevant associations
- (5) To make recommendations to the clients for

expansion of QBS

- (6) To propose appropriate changes in relevant legislations with consensus of the clients

Mr. Takemura demonstrated "How does QBS work to save Design cost and Life-cycle costs for Projects?" by using diagrams to get understandings of common people.

In order to ease the free discussions, Mr. Takemura also put forth the following topics:

- (1) Why we cannot get understandings on QBS of the clients and nation?
- (2) How we can demonstrate benefits of QBS?
- (3) Which measures do make breakthrough?
- (4) What are action-plans to take?

The followings are comments and opinions raised in the free discussions:

- We should understand and promote the spirits of the Brooks Act.
- It is extremely difficult to verify advantages of QBS in common words.
- Failures to achieve quality-products sometimes stems from very simple causes but not the procurement method.
- Chronological records on a project are essential to be maintained to ensure the quality of the project.
- The general contractors of Japan are in favour of QBS.
- The effects of QBS are indicated in informal investigation of number of awards for consultant's excellent performance in comparison with QBS and CBS.
- Can pure QBS be existing? Should QCBS be the real case to exist?

4. Closing Sessions

Mr. Hatao stated in his summary remarks of the seminar as described below:

If selection of consultant who performs very important roles in a project study, design and/or construction management is made simply by price competition, incentives to achieve quality-product

and to develop advanced technologies or proposals should be weakened to a large degree. Thus, the interest of the public in the project would be sacrificed. These relations have been well understood in many Western countries who put public health and safety in utmost importance, and therefore they applied QBS as seen with the Brooks Act in the US or QCBS in others.

AJCE should lead all the consultants to promote QBS for the sake of the nation's interests by fulfilling the following requirements:

- Keep good faith confidence with the clients.
- Make our appeal to the public for use of QBS for the sake of public interest.
- Propose type of suitable jobs for each selection method of QBS, QCBS and CBS, as reality.

At the closing remarks time, Mr. Hirotani emphasized the following points:

The value of consulting engineers is comparatively declining these days, but we should proceed to participating in policy-making processes. To achieve this goal, we are required to make our explanations and appeals to nation.

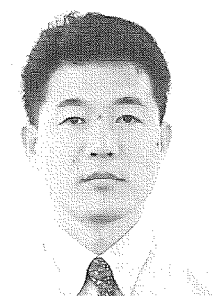
5. Epilogue

This seminar was not the terminal of our road but just the starting point to the goal. It was learned that there were varieties of views and opinions among consultants, but if we dispatch our considerations and beliefs to the public by picking up some essential issues and studying them further, the target will be getting close to us.

In the end, the writer wish to recall some statements of Jack Brooks, the initiator of QBS in the US, as saying in his letter to the General Accounting Office in November 1967, "the traditional approach represented the best interest of the Government" and "it behooves the Government to optimize in every way the chances of selecting the A/E who will design the best possible building that can be constructed at the least possible cost."

AJCE/ACEA Young Professional Exchange Program Reports 2004

Young Professional Exchange Programme-Japan in 2004



Kunji AKINAGA

Chair

YPF•YPEP Sub-Committee, AJCE

Preface

In 2004 year, six trainees stayed in Japan for the programme. From last year the term was 4 weeks extended one week and the discussion forum called "Young Summit" was held at the last day of the programme. The formal events organized by AJCE started with the welcome ceremony. There were some formal events to help the trainees for better understanding Japanese culture, like half day tour in Tokyo, small party cultivating friendship at Japanese traditional drinking house called "Izakaya", traveling to Nagoya by Shin-kan-sen (super express train) to attend the 11th World Congress on Intelligent Transport System (ITS) and experienced future transport systems, visiting soy-source factory and Japanese doll factory to look at Japanese daily life, and 3 days tour to Kyoto and Nara for watching Japanese tradition and historical buildings etc.

Experiences at the host companies and the above cultural experiences should be useful to understand Japan during their stay.

The list of the trainees and the host companies are shown in the table.

At the welcome ceremony at Chodai Co.,Ltd on October 16th, there were trainees who introduced themselves in Japanese. Mr. Hatao as Chairman of AJCE Professional Training Committee addressed and Mr. Akinaga as Chairman of AJCE YPF/YPEP committee explained the activities of AJCE-YPF/YPEP and the programme of the Young Summit.

Tours

At the half tour in Tokyo, they visited some sightseeing spots to look at "present Tokyo", but they seemed rather to enjoy walking in the downtown "Ginza" at leisurely pace after the tour. At ITS in Nagoya City, I believe that they could have a glimpse of "Japanese future", even though it was a very short time to stay. At the visit of the soy-source factory, many of them were interested in because even Japanese people had no chance to see the process. At the Japanese doll factory, detail works had to appeal Japanese traditional art and technology. During the tour in Kyoto and Nara, some trainees seemed to have had a lot of studies about Japan with thick guide books, and many historical woody facilities and statues of Buddha could satisfy their interests

Table1. The list of the trainees

Name of the trainees	Company	Host company
Mr. Anthony Fullelove	Maunsell Australia Pty Ltd	P.T.Morimura Associates Ltd.
Ms. Natalie Funtera	GHD Pty Ltd	Chodai Co.,Ltd.
Ms. Amanda Lake	Kellogg Brown & Root Pty Ltd	Nihon Suido Consultants Co.,Ltd.
Mr. Christopher Adamantidis	SMEC Australia Pty Ltd	Nikken Consultants, Inc.
Ms. Tanya Coates	Hyder Consulting	Oriental Consultants Co. Ltd.
Mr. Matthew Mckibbin	GHD Pty Ltd	CTI Engineering Co.,Ltd.

hopefully. Also some Japanese attendances were heard to enjoy the tour more than the Aussies.

Young summit

At the young summit on the last day, Dr. Tomaru of AJCE president had an address and the trainees presented with the following topics.

Topics:

- Future view of young engineer
- Bad points and disagreeable custom of Japanese firms
- Considerable matters in situation of working together
- Private life after work / holidays
- Any things you are interested in or noticed, remarkable differences
- Others which you want to explain or ask as discussion topics

After the presentations, they had a lively discussion with the following sub-topics based on the concept of "the subjects of future work"

- Back up system for Young Professionals (Actual and Expected condition)
- What we need for success of capacity building?

Summary

- As an education programme, training at Japanese company is available
- Temporary transference to governmental organization is regarded as a training programme
- As Australian engineers often change companies, employer are not interested in training and educating young engineers
- There are many cases to go back to university to study again and more in order to get better position and salary
- Companies are ready to invest valuable engineers
- In Australia, senior engineer have opportunities to attend conferences if they are worth to doing from the marketing point of the view. In Japan, every engineer can join any conference if he/she wants and/or is interested in.
- On-job-training is useful despite of the conference and seminar because they are sometimes boring and attendance is not always strict.
- Young Professionals need initiative

At the end session of the summit, they talked about "Web site" especially "the Future Net" which is now operated in Australia. As the Future Net has just started, not so many young professionals registered. It is being improved at present.

AJCE asked them the Net Discussion Forum of FIDIC-YPF. Both of Australians and Japanese spoke their opinions like,

- In such Net system, so called "Champion" in a group should lead many members
- Meaningful output must be shown
- Rotation of the charge in the member will be an effective way to manage the system
- It will be fun to communicate many people of other member associations in the net.
- Important thing is to keep updating topics and information in a short time, otherwise it will be bored

The young summit provided lively discussions and bilateral understanding. I hope that this experience build strong network between both countries and as the result, it makes business chances in near future.

Comment

The more number of the times of exchange programme, the more information trainees got and more knowledge about Japan they studied before arriving, but unfortunately some of them had done carefree activities which caused immoral results or broke rules in Japan. Experience makes overconfidence in some time. I felt that this was a good time to reconfirm the object and the meaning of the exchange programme each other.

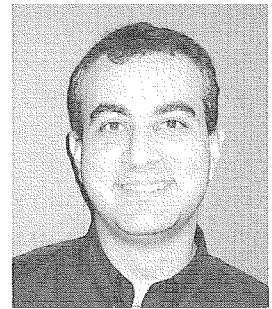
The number of people looked after the trainees increased. This is another effect caused by the exchanges, but not many Japanese can speak English well. Some of them had very hard time to communicate because the trainees spoke English fast and fluently from the first meeting. There were some misunderstandings between host families and the trainees in daily life. As this programme is in a short term, it is important to understand promptly and communicate effectively.

AJCE-YPF/YPEP would discuss how to manage this programme better and keep good relationship for our future.

Young Professional Exchange Program (YPEP)

Christopher ADAMANTIDIS

Engineer, Coasts and Estuaries
Snowy Mountains Engineering Corporation, Australia



INTRODUCTION

Christopher ADAMANTIDIS represented the Snowy Mountains Engineering Corporation (SMEC Australia) on the Young Professionals Exchange Program (YPEP) in 2004.

I spent four weeks at NIKKEN Consultants, a multidisciplinary consulting engineering company. I was assigned mainly to NIKKEN's Tokyo office, but also spent time in the Nagoya and Osaka offices.

The Program gave a good introduction to the field of engineering in Japan, as well as much insight into Japanese culture and way of life. I stayed with Mr. Motoyama and his family for the majority of the four week program, as well as with Mr Hashitani and his family, and I thank them very much for their kindness and for taking me into their homes over the four week program.

INTRODUCTION OF NIKKEN CONSULTANTS

NIKKEN Consultants was established in 1959 and has about 420 staff, including specialists in water resources, hydraulic structures, highways, bridges, coastal engineering and urban planning; as well as environmental assessment, information technology, and an overseas projects division. The company has eight branch offices in Japan as well as many sales offices, and an overseas branch office in Jakarta Indonesia. NIKKEN's major clients are public corporations, government authorities, and the Japan International Cooperation Agency (JICA).

OVERVIEW OF PROGRAM

Upon arrival in the NIKKEN Tokyo Office, I was officially welcomed by the NIKKEN staff and met with the NIKKEN Company President, Dr. Tomaru, as well as many of the Tokyo office engineers. I presented an overview of SMEC Australia, the type of projects I have been involved with, and an explanation of Public Works in Australia. I also had the opportunity to meet the engineers at Nagoya and Osaka offices, where I was taken on site visits of

major engineering projects and problem areas.

Some of the site visits included Coastal Engineering projects at the Seishou Coast, west of Tokyo, where I toured some coastal protection projects such as the Sagami River mouth artificial headlands, and saw many of the unique problems faced along a typical stretch of Japanese coastline. My professional interests lie mainly in the field of Coastal Engineering, and I was able to have technical discussions with the coastal engineering staff about some of the analysis techniques that both our companies use.

From the engineering site visits, I have learned that Japan faces many unique engineering challenges compared with Australia. Natural disasters such as typhoons, earthquakes and tsunamis occur frequently and high population density forces large scale infrastructure developments to occur in areas where they would not be allowed in Australia, such as major highways along coastline areas and high urban density in floodplains immediately adjacent to major rivers. This has resulted in much of the natural landscape being transformed to accommodate this development (for example, the construction of "super levees" along riverbanks to prevent major flood catastrophes and the construction of much major transport infrastructure such as highways, railways, bridges and tunnels on a massive scale).

During the YPEP Program I was introduced to NIKKEN's various divisions and to many of the interesting projects that the staff and in particular, young engineers have been involved with. One interesting international project that NIKKEN has been involved with is the restoration of the Mekong Riverbank, which uses traditional Japanese engineering technology that is environmentally sound and low cost. Soda mattress technology, whereby rock-filled mattresses made from live tree branches are placed on the riverbank, allows growing tree roots to naturally cement the riverbank together while

providing effective protection against erosion.

In recent years in Japan, environmental protection is becoming more important and this is reflected in NIKKEN's company philosophy, which states "we are examining our role and responsibility as construction consultants in a new light, focusing especially on our vision of the future of this planet and its inhabitants and the infrastructure we can contribute to this new era." NIKKEN is a very progressive company, and despite retaining its traditional values, it is recognising the importance of environmental sustainability, it has a sizable proportion of female engineering staff (comparable to the proportion of female engineers in most engineering firms in Australia), and runs an English language course for its staff recognising that international dealings are becoming more and more important. The company is generous in providing staff with the tools they require to provide a good service to clients, and is investing in new technology to build up their business in the future. It also tends to support staff in their academic and professional development. In many ways, NIKKEN is a very similar company to SMEC, facing many of the same challenges and hopefully we can help each other, learn from each other and continue to exchange ideas into the future.

LIFESTYLE OF YOUNG ENGINEERS

As part of the YPEP program, I had the opportunity to talk with the young engineers at NIKKEN about their experiences and their lifestyle as young engineers in Japan, and compare their way of life with our lifestyle as young engineers in Australia. Young Japanese engineers tend to work many more hours than engineers in Australia. The reasons for this are complex, but several factors contribute to the hard-working lifestyle of Japanese engineers. One of the reasons is cultural (people's lives are closely linked with their company). Working until 9 or 10pm and on weekends is normal and is generally expected. In addition, clients can be very demanding, and project scopes can change during the life of a project (with no increase in budget) as contracts in Japan often can be ambiguous. Relationships between the company and the client (in most cases, the government) are very important in the engineering business in Japan and it is important to maintain good relations in order to maintain the client base. This requires over-servicing of the client to maintain client satisfaction (and subsequently, requires staff to work very hard). People often work on several projects at the same time, have administrative tasks to be done during the day, and their managers can sometimes be too busy to provide much guidance with their work.

After work, young engineers tend to socialise with their work colleagues (usually, most days of the week). They tend not to use all of their annual leave and do not have as much time to spend with their families. In Japan, people tend to stay in the same company for 30 years or longer ? part of the reason for this is that an engineer's progression is based on years of experience and salaries are similar between different companies. Also, the company is a large part of people's lives and culture (in a way, to change companies would be like changing your family!)

In contrast, in Australia working hours tend to be shorter and people change companies several times throughout their careers. Social lives are generally kept separate from working lives and people do not tend to socialise with work colleagues outside of work as often as in Japan.

JAPANESE CULTURE

Japanese culture is very deep, and lives within all the Japanese people. The culture is part of the nation's psyche and permeates into every aspect of people's lives, including the engineering industry! Honour and ethics are very important and this is reflected to some degree in working relationships and the working environment in Japan. Good personal relations with clients and colleagues, and maintaining honesty and sincerity as well as civility are very important virtues. Ensuring that your guests are treated with honour and dignity and that they are well looked after is very important ? all of the Japanese people I have met have a very strong sense of empathy with people's feelings.

BENEFITS OF YPEP

I think that both Japanese and Australian people can benefit very much from this cultural exchange program, and that both Australian and Japanese engineers can learn much from each other. Australians can learn from the forward-thinking nature of Japanese engineers and the Japanese work ethic. We can also learn much from Japanese people's sense of kinship with their work colleagues as well as benefiting from Japan's special expertise in engineering. In Japan, I think the engineering industry can learn from Australians by allowing them more personal time to spend with their families, and more leisure time to carry out activities outside of work time that they enjoy, so they can work more effectively, efficiently and with less stress. Also, perhaps Japanese engineers need to intensify their efforts to protect natural areas that still remain by adopting less intrusive engineering design.

CONCLUSIONS

The YPEP Program has given me enormous insight into the Japanese culture as well as the way that the Japanese engineering industry works. This was a wonderful opportunity to exchange ideas on a professional as well as cultural level and I would like to thank very much my company SMEC Australia,

AJCE, and of course, all the new friends I have made at NIKKEN, including Mr. Kenji HASHITANI and Mr. Hiroshi MOTOYAMA, for organizing the program for me and taking me into their homes. I have made some great friendships during this program and hopefully we can continue to maintain the friendships between us.

Young Professional Exchange Program (YPEP) 2004

Tanya COATES

Environmental Consultant
Hyder Consulting



Konnichiwa. Watashi wa Hyder Consulting no Tanya Coates desu.

I am an environmental engineer from Hyder Consulting, Sydney, Australia and I have been fortunate to attend YPEP 2004. Hyder Consulting is an engineering consultancy providing management, engineering and environmental consultancy services for infrastructure and construction initiatives worldwide. We are a part of an international group with offices in Asia, United Kingdom, Europe and the Middle East. Internationally we have over 2,500 professional staff, of which over 300 people are based in Sydney and Melbourne.

Oriental Consultants

During my stay in Japan I was hosted by Oriental Consultants in their Osaka office with many trips to Oriental project sites in Japan.

Oriental Consultants was established in 1957 and has expanded to be one of the leading consulting companies in Japan with offices in Tokyo, Osaka, Miyagi, Aichi, Hiroshima, Fukuoka and a number of international project offices. The company is accredited to ISO9001 Quality Management and ISO14001 Environmental Management and undertakes work in a large number of areas including:

My first impression of the Oriental Consultants Osaka Office was that it was very similar to my office in Sydney. There were many people all busily working on their projects at individual desks in an open plan office and asking each other for help to solve project problems. Having now been in the office and on project sites for the past 4 weeks I have noticed some differences that were not apparent at first. These include the long hours that everyone works, the extensive commuting times that most staff experience every day and the fact that most people stay with the company for many years.

Project Visits

During my exchange a number of staff from Oriental Consultants took me on site visits to inspect construction projects, completed projects and areas where projects are planned.

One of these site visits was to Fukui where we inspected Eihejii-Ono Road, this is a four lane expressway currently being constructed, which has been designated as an "ecoroad". This means that the road will incorporate measures designed to alleviate the environmental impact of the road. While in Fukui we also visited Fukui Nature Conservation Centre which has displays explaining the ecology of the area including a display of a rice paddy ecosystem.

Roads	Environment	Information Technology
Tunnels	Underground Construction	Construction Management
Bridges	Transportation Planning	Construction Supervision
Railways	Urban and Regional Planning	River and Erosion Control
Ports, Harbour and Airports	Facility Maintenance	Sewerage

We also visited the construction site of a ring road around Gifu City which is currently being built. The road has also been nominated as an "eco road" and has a number of interesting measures implemented to protect the environment including:

- Large retaining wall constructed to hold the road up, instead of using a conventional batter. This reduces the area of impact of the road and preserves a large section of important habitat adjacent to the road
- Underpasses to allow animals to pass underneath the roadway
- Stepped drainage system, recreated to emulate a natural rocky creek, to facilitate fish movement
- Snow retaining structures on steep batters
- Public involvement area at of the important interchanges of the project with a view of the entire interchange

Oriental Consultants have been commissioned to undertake design and construction of a large road project in Tokushima Prefecture, Shikoku. We went on a two day site visit of the area to investigate the proposed routes for a new ring road and another expressway from Tokushima down the east coast of Shikoku. This new road would remove some of dangerous corners from the existing road, making access to the south eastern parts of Shikoku better.

To get to the site we drove from Osaka and crossed from Honshu to Shikoku over the Akashi Kaikyo Bridge and Ohnaruto Bridge. Akashi Kaikyo Bridge has one of the longest suspension spans in the world, at a length of 1,991 metres. Both bridges were opened to traffic in 1998.

Homestay

A major part of YPEP was to experience the lifestyle of a typical Japanese family. I was fortunate to be allocated two fantastic host families, the Asada Family and the Kishida Family.

My first host family was the Asada Family. Asada san, his wife and their 3 children (17 year old daughter and two 13 year old twin boys) and their little dog welcomed me into their home and lent me a room and a futon to sleep on, as well as educating me in the finer points of Japanese cuisine and customs. They took me to various restaurants, Universal Studios, shopping in Diamond City and also cooked fantastic meals at home including the Osaka speciality okonomiyaki (which was very delicious). I

was very fortunate that Asada san and his wife both speak some English and all three children are also learning English at school. I felt like a very honoured guest while I was staying with Asada san and I will always remember their kindness and generosity and hope that one day I can return the favour.

My second host family was the Kishida family. Mrs Kishida works for Oriental Consultants as well as raising two children, while her husband Mr Kishida is located in Tokyo for work. She is a lovely person and her children (8 year old boy and 4 year old girl) are adorable. Mrs Kishida and the children took me to Kobe to visit the various jinkan in the area and to Kaiyukan (Osaka Aquarium) to view the many sea exhibits, including one of the Great Barrier Reef. I thoroughly enjoyed my time with the Kishida family, playing hide and seek with the children and chatting with Mrs Kishida after work. I also felt like an honoured guest in the Kishida household and hope that one day I can repay their kindness.

Conclusion

I am very happy to have been able to participate in YPEP 2004 and there are many people who I would like to thank. AJCE and ACEA for organising the exchange and making it possible for young engineers from both Australia and Japan to meet and learn about each others culture, way of life and work practices. Oriental Consultants for being excellent hosts and for staff from Oriental for taking time out from their busy work schedule to escort me to all sorts of interesting project sites, the ITS Conference and other places on interest in Japan. My company, Hyder Consulting for participating in YPEP and sending me on this exchange. I anticipate that my return to Australia will be with a greater understanding of engineering in Japan, and contacts from all the interesting and fantastic people I have met on this exchange, which will hopefully lead to exciting future interaction between Australia and Japan.

Finally I would like to say a big thankyou to Asada san and Kishida san and their families for hosting me in their homes and making me feel so welcome. I think that the host families have played a very important role in my YPEP experience and have made me feel so welcome and happy to be in Japan. I hope that one day I can return their generosity.

YPEP 2004 Report



Amanda LAKE

Engineer, Water and Wastewater
Kellogg Brown & Root

One of six participants selected for the 2004 Young Professionals Exchange Program between the ACEA/AJCE/ACENZ, I was hosted by Water and Environmental Consultants Nihon Suido (Nissuicon) at their Shinjuku office in Tokyo. My four week program, and first visit to Japan, comprised lectures on company operations, site visits to drinking water, sewage and river water purification facilities and numerous welcome parties!

The YPEP provided an excellent insight into Japanese culture and business in the consulting industry and a great opportunity to work in and to experience another country. The site visits scheduled often allowed travel outside of Tokyo to other prefectures and cities, and the opportunity to attend these site visits was invaluable. The hospitality and organization undertaken by my Japanese hosts was at times overwhelming and I am very appreciative of the time and effort they put into my training.

A number of differences between the operation of Japanese and Australian consulting companies were evident from experiences during my stay. This report serves to highlight some of these. It will also discuss the benefits of the YPEP and give some ideas for further developing the relationships formed during the exchange.

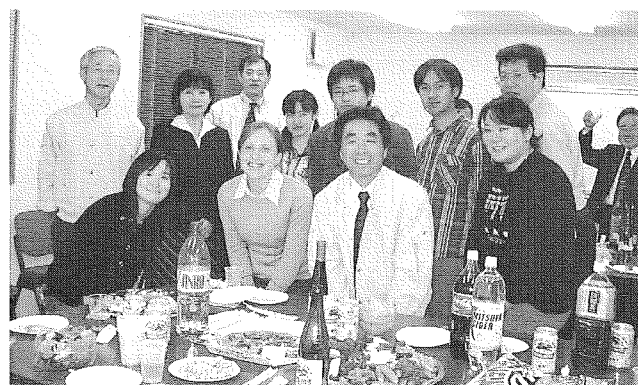
Career paths for Young Engineers

In Japanese consulting companies there appears to be

a much greater focus on achieving the equivalent of Chartered Engineering status than in Australia. All graduates are expected to sit the 2 exams required to achieve Associate and Full Professional Engineer Status in Japan. The company pays the significant costs for completing these exams and the associated registration fees required to be a member of the professional organization. Annual subscription costs for journals are borne by the employee similarly with some companies in Australia.

In Australia, there is little motivation to achieve chartered engineering status and significant disadvantage due to the large costs required. The status of chartered engineers is also less than that in Japan. Young engineers may have more direction in this respect in Japan than in Australia, where there is no direct goal except perhaps in improving technical or management skills as their career progresses. If deemed useful, engineering associations in Australia could improve the accreditation process and provide more reason for young engineers to work towards it. This is something being addressed by the Australian industry presently.

Aside from professional development it seems that young engineers in Japan are less exposed to field work than young Australian engineers who are encouraged to work out of the office to gain valuable site experience while still young. This may be due to



Nissuicon Welcome Parties at head office, Shinjuku and the Toyodo River Engineering Department

the fact that Japanese employees tend to stay working for the same company throughout their entire career and hence there is not a rush to gain experience which they may get in time. As a young designer, I believe practical site experience is invaluable in understanding the design process and drivers.

Another issue I noticed as a female engineer was the lack of Japanese female engineers throughout my stay. In Australia the number of females studying engineering is increasing - this is obvious from the number of females participating in the YPEP which has increased from 1 Australian in 6 in 1996 at the YPEP inception to the 3 in 6 present for the 2004 exchange. The YPEP again provides an insight into the workforce differences between Japan and Australia and may provide information on future trends such as females employed in engineering.

General working approach and customs

The Japanese culture appears far more polite and formal than the Western culture and attitude in both personal and office environments. From my experiences, the attitude of Japanese towards visitors is far more hospitable and welcoming than in Australia and no effort is spared in looking after visitors to the office.

The Nissuicon office environment was very similar to an Australian environment though Australia lacks the smoking areas still prevalent in Japan! Despite the formal Japanese way, the same degree of office conversation and discussions seems to take place.

At my company, some employees work slightly longer hours than their Australian counterparts, often spending a day a weekend working in addition to a five day week. In Australia, most people only work a 5 day week, with hours from 8am to 5:30pm in many cases. Australian people seem to have more recreation time than Japanese people due to shorter commuting times and shorter working hours. This difference may result in changes in the work efficiency and overall employee health of Australian and Japanese consulting engineers.

Another difference is the age and experienced based promotion rather than the commonly adopted performance based promotion in Australia. In the case of Nissuicon, the company has considered introducing a performance based system but employees are uneasy about this. Based on my experiences in Australia, most employees are happy to have salary reviews based predominantly on their performance.

Professional associations

The Institution of Professional Engineers - Japan appears similar to Engineers Australia, though a separate Japan Accreditation Board for Engineering Education (JABEE) is responsible for accrediting Engineering degrees. From discussions with Nissuicon employees, it is the Association of Japanese Consulting Engineers (AJCE) who organise technical sessions similar to those organized by groups within Engineers Australia. From my discussions with employees, these don't seem to be widely attended - perhaps due to the longer working and commuting hours of Japanese consulting engineers. In Australia, the Australian Consulting Engineers Association is only for company members and does not provide such technical support for its staff. The AJCE is for both individual and corporate members.

There is a Young Professionals Forum within the AJCE who participate in international events and organize networking between young professionals, perhaps in a similar though less frequent manner to the Engineers Australia Young Engineers Group. From information available, it appears that young Japanese Engineers are less likely to attend extra-curricular professional development events, in part perhaps due to their longer working hours. While some Australian companies actively encourage their employees to attend such events, it appears that Japanese companies are less likely to do this. This could be an area for improvement in Japan which I believe is being addressed in part by the AJCE in encouraging participation from young engineers.

Japanese hospitality and relationships between consultant and client

Throughout my stay with Nissuicon, I observed the strong relationships maintained between consulting company and their public authority clients. During site visits, I was given detailed presentations on the plant operations or personnel responsibilities by employees of water authorities. The time devoted by former Nissuicon clients to preparing for and accommodating these site visits for myself and my Nissuicon colleagues was admirable and showed that a strong relationship is maintained by consultant and their customer despite the fact that there was not a current working relationship. The amount of effort put into preparing these presentations for my training program never ceased to amaze me and once again, I would like to thank the hundred or so people who gave up their time to present my training schedule. From my experience working for Australian consulting engineering companies, such hospitality

does not exist and aside perhaps from individual relationships, there is little contact between client and consultant between jobs. I believe that Australian companies could learn from the strong and respectful relationships Japanese consulting companies seem to have with their clients.

Improved status of water and wastewater infrastructure in Japan

While the provision of engineering water infrastructure in the two countries is similar, Japanese society seems to have more pride and interest in water and sewage facilities. Water authorities have a strong focus on public education - perhaps a legacy from historical problems with water quality. At most facilities I visited, there were displays and information available for viewing by the public. Japanese water authorities are increasingly aiming to improve the view of water and wastewater facilities. Water infrastructure plays a significantly higher profile role in Japan which is something that Australia could learn from with its need for an increasing focus and public acceptance of recycled water.

Consulting engineering and research

From what I learned during the YPEP Japanese consulting companies undertake research and actively participate in public/private working groups to investigate and develop new technologies.

Most Australian consulting companies do not undertake research while marketing their engineering solutions as 'cutting edge' and 'state of the art'. I believe this is another aspect of the Japanese consulting industry that Australia could learn from.

Developing the YPEP

There are a number of significant differences between Australian and Japanese consulting firms and in working life in general. The opportunity to experience these by working in a Japanese consulting firm on the YPEP for four weeks was invaluable and I feel very fortunate to have been selected to attend. I believe that continuing to run exchange programs like the YPEP will allow continued sharing of information and new ideas between countries.

An outcome of the YPEP 2002 was to focus on capacity building of the trainees with the possibility of developing joint work opportunities and further opportunities for collaboration between companies and associations between countries (2002 AJCE YPEP Report). I see a few ways in which this could be done, listed in order of increasing involvement:

1. At a basic level, continued correspondence and



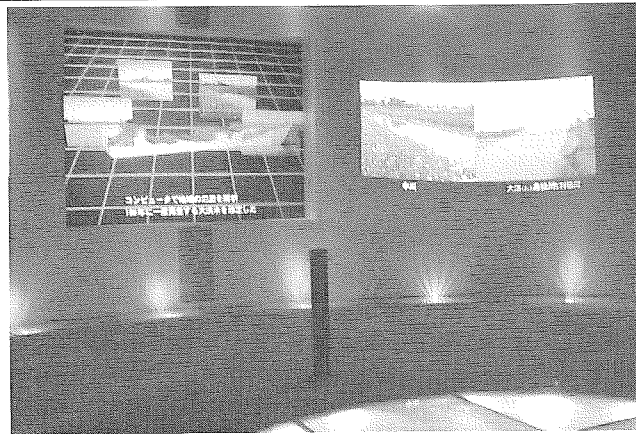
All 25 water authority staff gave special presentations in English during a site visit to the Kita Chiba Water Treatment Plant.

sharing of information between trainee and host company personnel and between trainee and colleagues in their home country. As an outcome of my exchange I will forward some information on biological modeling software we use in Australia to a Nissuicon colleague.

2. Upon return to their host country, trainees could strive to take a more active role in their professional organizations such as ACEA, Engineers Australia, AJCE and globally, FIDIC. This will allow them to share their experiences with a wider audience and potentially influence the development of future programs.
3. Trainees could take a trial idea back to their home country and report on its implementation to improve business practice. This could be as simple as better office paper recycling.
4. Collaboration between trainee and host companies in an actual project. This will be more challenging due to language barriers and the fact that many consulting company clients are local authorities, however even being aware of what the other company does in a certain business situation may prove useful and applicable in another situation.

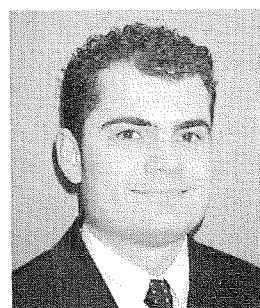
I would like to once again give thanks to my own company, KBR, my host company Nissuicon. In particular I would like to give special thanks Mr Akinaga, Mr Fujie and Ms Tada for organizing my training schedule and ensuring I didn't get too lost in the Tokyo rail network. Thank you also to Mr and Mrs Tahara for being a wonderful host family during my stay.

ほんとにありがとうございました
アマンダ レイク



Public education displays at the Metropolitan Area Outer Discharge Channel constructed to mitigate flooding.

2004 Young Professionals Exchange Program



Matthew McKIBBIN

Transportation Planner
GHD Pty Ltd

I was fortunate enough to represent GHD Pty Ltd in the 2004 AJCE-ACEA Young Professionals Exchange Program (YPEP). My host company for the four week exchange in Japan was CTI Engineering. This exchange follows a history of exchanges between CTI and my company, GHD, over the last few years.

GHD is a large Australian-based professional services consultancy, employing over 2,500 staff in over 60 offices in Australia, the Middle East, Asia, New Zealand and the Americas. The company offers a wide range of services in the areas of management, engineering, the environment, planning and architecture. I am based in the Transportation Group in Sydney, where I work as a Transportation Planner. The main focus of the exchange program was defined by the AJCE as "Understanding differences between Japanese firms and Australian firms". During my time in Japan, I was able to learn a great deal about both the similarities and differences of being a consulting engineer in each country. While there are certainly differences, it was also useful for me to learn that many aspects of our industry are very similar. This is an important aspect on the path to working together constructively in the future.

Four key differences are discussed below.

Clients and winning projects

In CTI, almost all projects are undertaken for the national and prefecture governments. This reliance on public sector work has led to a strong consulting engineering industry since its inception after World War II. However, in recent years the decline in public expenditure on infrastructure has caused problems for the engineering industry.

In comparison, GHD has a wide base of clients spread across three levels of government in Australia, together with a large range of private clients and international projects. This diversifies the demand for engineering services and makes the industry less sensitive to fluctuations in workload.

Tendering for government projects in Japan is broadly very similar to that in Australia. Typical steps in each are:

- Advertising of the tender publicly or to a selected group of consultants;
- Consultant submits a proposal, outlining the proposed project team, relevant experience, methodology and cost; and
- Client selects a consultant based on the proposals

received, taking into account weighted factors for each component of the tender.

The public sector tendering process in Japan seems very transparent, with each the project selection criteria specified in each brief and the results of the tender evaluation being available for viewing by all tenderers. This is a result of concerns raised in the past that the tendering process was not genuine and that projects were awarded based on personal relationships and preferences.

One apparent difference is that in Australia, proposals are often prepared in each company's format and project fees are not fixed. Japan's tendering system for the some clients such as the Ministry of Land, Infrastructure and Transport Government (MLIT) are very structured, with a strict format and length, as well as a nominated target price. Introduction of a similar system in Australia would simplify the tendering process and reduce costs to consultants.

Career progression and hierarchy

The Japanese Consulting Engineering industry appears to be a more structured in terms of career progression and organisational hierarchy than in Australia. Differences I have noted include the following:

- Greater focus on registration as a Professional Engineer (P.E.) in Japan than the equivalent Chartered Professional Engineer (C.P.Eng.) in Australia. Also, P.E. accreditation is very difficult to obtain, requiring at least 7 years of experience, an examination and an interview.
- An individual's seniority and professional experience are more dominant factors in Japan in the determination of salary and career progression than in Australia;
- More clearly defined roles within each division of the company, lead by a senior engineer who oversees all of the work of his or her team;
- Australian companies typically have more structured "Young Professionals" or "Graduate Development" programs. This type of scheme assists younger engineers to transition from study to work, including gaining professional accreditation; and
- Some Japanese firms maintain contact with retired staff through special part-time positions. This allows the company to draw on the significant experience and respect of senior professionals in an advisory role.

International factors

In the past, Japan has enjoyed a large public sector

investment in infrastructure. This has given the country excellent infrastructure networks as well as providing engineering consultancies with large and interesting projects. However, in recent years, with the slowing of the economy and greater pressure on government budgets, less money is available for infrastructure development.

CTI has recognised this trend and is diversifying its client base. This strategy includes being more involved in international opportunities, both in Official Development Assistance (ODA) and private sector projects.

The Japanese Government spends a large amount of money on international aid, with a focus on projects in East Asia. This, and other similar programs, has allowed CTI International (CTII) to be involved in some 343 projects in 43 countries over the last 30 years. However, at this stage there are some barriers holding the company back from competing on projects let by international governments and businesses. This is sometimes overcome through alliances with international consultancies.

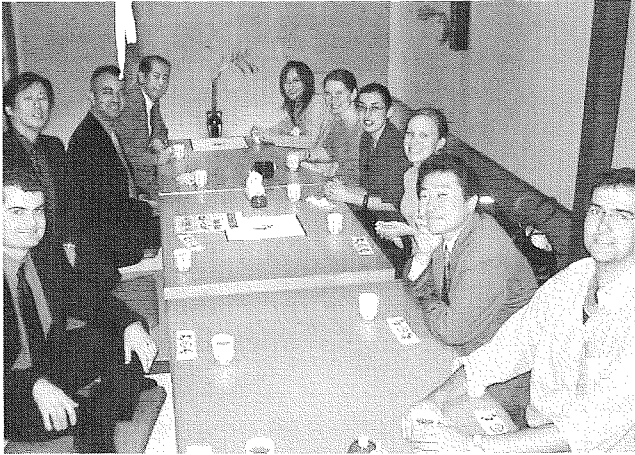
Life at work

It is apparent that, on average, Japanese engineers spend more time at work than Australian engineers. The longer hours required of Japanese engineers is an expectation of clients and their companies. This is particularly the case towards the end of the financial year as many projects come to completion.

One other difference is that Japanese companies have traditionally been more of a 'family' than Australian firms. This is apparent through an increased level of out of hours activities such as dinners, sports and social days. This helps build a sense of camaraderie in the office and may contribute to the lower turnover of employees experienced in Japan compared to other countries.

Conclusions

I have thoroughly enjoyed my time in Japan and have gained a valuable insight into the operation of a Japanese engineering consultancy. This opportunity presented by AJCE and ACEA has sharpened my knowledge and understanding of international engineering opportunities. It has also contributed to my technical knowledge and professional development by allowing me to study the challenges and responses posed in the engineering sector in Japan. I am particularly grateful to GHD, CTI and my host families for making my stay not only possible but extremely enjoyable.



As I have noted, while differences are always apparent, my overriding observation is the similarity of our approaches to our work as professional engineers. This cultural understanding is an important first step in the establishment of international links and possible future collaborations. As the world becomes more integrated, and as the national basis of projects and consultancies becomes less important, engineers will be required to work across borders with professionals from around the world. Especially for young engineers, this is an opportunity that we can continue to develop and enjoy.

YPEP2004 Trainee Report



Natalie FUNTERA
Environmental Engineer
GHD Pty Ltd

I have been very fortunate to have spent the past four weeks working with Chodai Company on the YPEP program in Japan. My experiences in Japan have been incredibly valuable and rewarding. In particular, I have been overwhelmed by the warmth and generosity shown to me by the people I have worked and lived with in Japan.

In discussions with young engineers in Japan, it seems that young Japanese and Australian professionals share very similar aspirations. We are all looking for interesting and exciting projects to work on and we want our work to be fulfilling and challenging. Many of us are hoping to be involved in projects in other countries.

I have learnt a great deal about the fields of work that Chodai are involved in through numerous presentations, meetings and site visits. I am very thankful to all the people within the company who gave up their time to prepare presentations in English and discuss their work with me.

I have been impressed by a number of aspects associated with Japanese firms. In particular, Japanese firms seem to play a leading role in the research and development of new technologies. Japanese firms seem very proud of being on the cutting edge of their fields of expertise and are

willing to invest in research and development at a greater extent than Australian firms.

I have also been greatly impressed by the level of environmental awareness demonstrated by Japanese firms. It is commendable that many Japanese consulting firms are ISO14001 accredited (International Standard for Environmental Management Systems) and are actively incorporating environmental considerations into the projects that they are engaged to undertake. I will be taking with me to Australia ideas on how my firm could improve the way in which we incorporate environmental considerations into our infrastructure projects.

I also witnessed a strong team work ethic within the offices I visited. Many work colleagues seem to be good friends out of work. Staff members belong to company sporting clubs and go on weekend outings. Many staff members go out together in the evenings after work and it was great to see senior staff and junior staff often socializing together.

I was surprised at the lack of female engineers within the firm that I worked for. Identifying the barriers to females entering engineering firms and improving recruitment and retention of female staff would seem to be a significant challenge faced by the industry in Japan. In Australia too, female engineers remain a

minority and it will take some time before females are equally represented within the management levels of our companies.

Fostering a family-friendly working environment is another challenge for both Japanese and Australian firms. Continually long working hours can potentially impact on the health of employees and cause great stress to their families. Ensuring that staff members have a balanced lifestyle would seem an important goal of all companies, both in Japan and Australia, as happy and healthy staff members means a more productive workforce.

In all aspects of my stay in Japan, I have been very well looked after. The experience of living in a home with Japanese families has given me a great insight into Japanese culture and customs. I've enjoyed eating meals of delicious Japanese foods, talking about our countries and cultures, trying to learn

Japanese language and going on outings with my host family very much.

Many people from the company I have worked with have taken me out for lunches, dinners and outings. The opportunity to develop friendships with so many people in Japan has been a great experience. The outings and tours organized by AJCE have been a lot of fun and it has been great to meet young people from other firms and see the sights of Japan.

My time on the YPEP program has been incredibly valuable. I will take home with me technical ideas that I will be able to use in the projects that I work on. But my lasting impression will be the wonderful hospitality shown to me during my stay in Japan and the friendships I have made. A special thanks to the staff members of Chodai who gave up their time to look after me and AJCE for their organization of this great program.

YPEP 2004 report

My experience on the YPEP program is somewhat different from my fellow trainees in that this is my second time to Japan. I first came to Japan as an English Teacher in Amami-Oshima (Kagoshima Ken) 5 years ago.

For me I was not only comparing the difference between working in an engineering consultancy in Japan or Australia, but I also constantly had to re-evaluate my image of Japan, comparing rural-Japanese life with that of salary-man in Tokyo. In some ways the difference is just as great.

I work at Maunsell, which is a multi-disciplinary, multi-national engineering design consultancy. The Brisbane office has 5 core market groups: Power, Transport, Environment, Building Services and Mining and Heavy Industry. I have been working in the mining and heavy industry group.

I have been working at P.T.Morimura and Associates (P.T.M.) in Nakameguro. PTM is a building services

consultancy with an impressive record. Some of the better known projects includes the Tokyo International Forum and the Yokohama Terminal.

Electrically, design in Japan and Australia is very similar. There are some quirky differences that have stood out for me.

Unlike Australia, a majority of the CAD work is relegated to junior engineers. Also, most of the professional drafters are women. I would like to see some of the old boy draftees back home wearing an apron.

The technology used in Japan is also at times mind blowing. Much of my time as a trainee has been spent either visiting projects (past and present) or visiting showrooms of electrical manufacturers. The display centers were absolutely amazing and really shows why Japan is considered the cutting edge of technology.

Anthony FULLELOVE

Electrical Engineer
Maunsell Australia Pty Ltd



As always, there are a couple of stock standard complaints about the working life in Japan. Some of these are deeply ingrained cultural differences between Japan and Australia and re-hashing them here would be of no great benefit. I think some other differences are somewhat exaggerated.

There is absolutely no doubt that the Japanese engineers work long hard hours, but I think many under-estimate the hours that many Australians work. Most engineers, at least in my field, would not work less than 55hrs a week. For example, engineers in the mining industry often work 14hrs a day for 4 weeks straight, away from their family with no weekends or holidays, terms that even a Japanese salary-man would refuse.

The time taken for travel is also often commented on. With the increasing size of Australian cities and the cost of inner city housing it is common for people to take 1 1/2 hrs to drive to work. Keep in mind, this is not on an amazingly efficient (albeit slightly crushed) Tokyo rail system but creeping up the expressway at 20km hour during peak hour.

Its common to focus on the negative aspects of Japanese working culture. We also have many good things to learn from Japan.

That commitment to quality and the pride Japanese take in their work is very inspirational. I attended a meeting between a large Japanese manufacturer, the client and P.T.M. as the design consultant. The manufacturer had supplied a special type of UPS system that was critical to the accelerated schedule of the project. The UPS had repeatedly failed. The humility and shame, the detailed explanation of the current problem and the ongoing exhaustive efforts to fix the problem shown by the manufacturer was very refreshing. Not a response you would expect from an Australian company.

Many westerners also look at the Japanese life-time employment as an inherently in-efficient, rigidity controlled an undesirable system. Japanese companies are over-staffed during quiet times and over-worked when large projects are won.

On the other hand many Australian engineers complain about job security. We have very little loyalty to our company because it is correctly

assumed that companies have very little loyalty to us. I think the sense of community, job security, the well-defined management roles and respect in Japan and Japanese companies can be very positive.

On a personal level I am totally overwhelmed by Japanese politeness and respect. It struck me the first time I was here many years ago and having come to Tokyo I have been more impressed than ever. It was something I incorrectly assumed was only part of rural Japanese life. To maintain the politeness and respect to each other, despite the pure intensity of Tokyo, is something that cities like New York, Sydney and London will never have.

So what is the benefit of the YPEP program? There is no better way to understand a working culture than total immersion. It is an understanding that cannot be gained from a holiday down the Gold Coast or a visit to Mount Fuji.

It would be impossible to change Australian or Japanese culture or business styles. They are very different and both have pros and cons. The power of the YPEP is to come to an understanding of some of the reasons for those differences and the ability to co-operate and compromise in future business and on a personal level.

I think every member agrees that YPEP has had a very powerful affect on all of us, an experience that we will never forget. I can also tell from the Japanese engineers at PTM that have already been on the program that it has left a very profound influence on them.

I was lucky to have 4 homestays during my YPEP training. Each homestay family was completely different but all fantastic. Late night ramen, fufu the dog, a bottle of whiskey and an old guitar, a hole in one at the hardest mini golf course in the world, abundant naked bonding, undead sushi, earthquakes, karaoke and all the other fantastic stories would fill many reports over. All I can say is a very heart felt thank you to all my homestays for everything.

I hope YPEP moves from strength to strength in the following years. I look forward to returning the incredible hospitality of my homestay families that I have received in Japan by hosting a homestay next year and many year to come.