Reshaping the Institute to Asia's Needs:
AIT pursues its mission
Reshaping the Institute to Asia's Needs:

AIT pursues its mission

Inherent to the nature of AIT is its capability to change in response to emerging and anticipated needs in the countries which it serves. The first major change, the transition from the SEATO Graduate School of Engineering to an independent, autonomous institution, was put into effect by the third Dean of the School and Founding President of AIT, Prof. Milton E. Bender, Jr. Prof. Bender, who visited AIT in early 1993 (16 years after retiring from his second Presidency), is certain that "AIT will continue to change many times in the course of its history. In those early years, I saw the Institute expand, fragment and reconsolidate. This process was repeated a number of times in the ensuing years. That AIT responds to change is its strength.

The conversion of AIT's existing academic structure into Schools is the latest demonstration of this strength. The four Schools will be in place by July 1993. Further details are on page 4.
BRIEF HISTORY OF AIT

March 1958
The SEATO Graduate School of Engineering project, proposed in 1957, was approved by the Council of Ministers of the South-East Asia Treaty Organization at its meeting in Manila.

July 30, 1959
His Majesty King Bhumibol Adulyadej of Thailand signed the Royal Decree establishing the SEATO Graduate School of Engineering, based at the Chulalongkorn University campus.

September 10, 1959
The School opened with the first group of 18 students from Pakistan, the Philippines and Thailand, studying Hydraulics Engineering.

March 1961
The first graduation was held to confer the degree of Master of Engineering on eight students. The degrees were jointly conferred by Chulalongkorn University and the SEATO Graduate School of Engineering.

June 1966
The SEATO Council of Ministers, meeting in Canberra, took the necessary steps to phase out control of the Graduate School and permit its establishment as an independent institution to be called the Asian Institute of Technology.

November 23, 1967
The Asian Institute of Technology Enabling Act was published in the Royal Thai Government Gazette. The SEATO Graduate School of Engineering ceased to exist.

November 24, 1967
The Asian Institute of Technology was established as an independent, autonomous, international institution of higher learning.

May 4, 1968
H.M. King Bhumibol Adulyadej graciously presided over the Eighth Annual Graduation, the first in which AIT conferred its own degrees.

February 14, 1973
H.M. King Bhumibol Adulyadej opened the new AIT campus in Pathum Thani province.

April 1979
AIT marked its 20th Anniversary, with annual enrollment averaging 485 students and 1764 graduates making up the alumni body.

September 1984
The Institute unveiled the 1985-88 Academic Plan which sought to achieve a reasonable balance between classical engineering and management fields and the consolidation of existing academic divisions, along with new ventures in natural resources management and manufacturing technology.

August 1989
AIT marked its Third Decade with an international forum on Higher Education in Technology for Asia in the 21st Century. The findings of the Forum contributed to proposed revisions in the Institute’s teaching, research, outreach and dissemination objectives.

On August 31, AIT was awarded the 1989 Ramon Magsaysay Award for International Understanding.

1991
A strategy study was carried out during the year, recommending a restructuring of the academic units and consolidation of academic programs.

1992
The recommendations of the strategy study were presented to the May 1992 Executive Committee meeting of the Board. It was decided that a restructuring should take place.

February 16, 1993
A memorandum of agreement was signed between AIT and the Socialist Republic of Vietnam to establish the AIT Center in Vietnam, with a branch in Hanoi and another in Ho Chi Minh City.

March 6, 1993
The amalgamation of the academic units into four schools and the appointment of Deans were officially announced.
PRESIDENT'S MESSAGE

A year ago I referred to 1991 as involving the initiation of long-range strategic planning. In fact this dominated campus-wide debate through 1992. Now the Institute is embarked upon a realignment of its academic administrative structure. This will bring the academic activities more closely into harmony with the mission of the Institute, as well as provide more flexible learning progressions for students and allow greater cost-effective use of teaching resources.

The ten Academic Divisions, two Interdisciplinary Programs and the School of Management will be reconstituted as four Schools, one dealing with civil or infrastructure engineering, another covering activities in natural resources, agriculture, energy, the environment, urban and regional planning and gender and development, a third concentrating on telecommunications, computer and industrial technologies, and the fourth dealing with management.

The advance to the future, too, was marked by the approach to maturity of new programs in Manufacturing Systems Engineering and Telecommunications, both of which graduated their first classes in December 1992.

In the September 1992 term, the number of registered students passed one thousand for the first time ever. Significant in this trend was a marked increase in staff students, reflecting growth of project research employment of research assistants and associates, and the higher number of students drawn from exchange programs with developed country universities.

Support, in cash and kind, for all Institute activities has never been stronger. However, the finances of the Institute are unusual in that so much of its income is in kind (faculty secondment and equipment grants, particularly) or restricted to specific project applications. As a result, there is difficulty in balancing the unrestricted operating cash (traditionally about one-fourth to one-third of the total unrestricted cash and kind income). This is a particular problem since scholarships (the principal source of income to this fund) have been held constant for a number of years. Since the principal expenditures are salaries and utilities, the per capita student expenditure tends to increase with inflationary pressures, whereas the per capita income stays constant.

Fiscal Year 1991-92 closed with the cash account in balance. However, strict budgetary control was put in place for FY 1992-93. At the time of writing, this control seemed effective, with all planned academic activities underway and the prospect of budgetary balance being achieved next June becoming clearer.

Her Majesty the Queen graciously accepted the AIT Gold Medal Award at a ceremony held on October 29, 1992. The medal was presented by Dr. Thanat Khoman, Chairman of the AIT Board of Trustees. President North presented the AIT certificate, which paid tribute to Her Majesty's successful endeavors in environmental protection and the conservation of natural resources. A painting contest on this theme was sponsored by the Institute.

Standing before one of the prize-winning entries are President North together with AIT Vice Presidents, Dr. Suvit Yodmani (left) and Prof. Ricardo P. Pama.

The year's most significant event was the visit of Her Majesty Queen Sirikit of Thailand. Her Majesty graciously consented to receive from the Institute a Gold Medal recognizing her leadership in the conservation of natural resources and protection of the environment. Associated with the event was the presentation of scholarships and fellowships to allow Asian students to study natural resource and environmental matters. These prestigious study grants carry the name of Her Majesty. They will assist the propagation of Her Majesty's principles and concerns throughout the region. The visit was a wonderful event which brought great happiness to all members of the AIT community.

The year saw the appointment of a new Vice President for Academic Affairs and a new Vice President for Development. Prof. Ricardo P. Pama succeeded Prof. Helmut Eggens in the Academic...
post and immediately restructured his office so as to pay greater attention to academic planning and policy development, while preparing for a measure of delegation of day-to-day responsibilities to the Schools. Dr. Suvit Yodhajj succeeded Prof. Fanna in the Development post, and also reorganized his resources to pay particular attention to developing financial support of the Institute in this region. In the short time since his appointment, Dr. Suvit has been conspicuously successful in harnessing government and private sector support in Thailand, thus compensating for a reduction in scholarship support from some of our traditional western donors.

1993 will be the last year for which the Annual Report restricts its attention to the AIT Campus in Thailand. The AIT Center in Vietnam is now starting activities in both Hanoi and Ho Chi Minh City. During the year, a number of feasibility and implementation missions were undertaken and contracts for Swiss and Finnish funding signed. The branch in Ho Chi Minh City, supported by Switzerland, will provide training in management education to teachers of four Vietnamese universities which plan to start their own Master of Business Administration degree programs. The branch in Hanoi will offer short courses in management to a wider audience drawn from the government and private sectors, as well as developing courses in agricultural and industrial manufacturing technologies. In both Centers the courses will be coordinated to provide an integrated sequence and will also be used to identify and prepare persons who may later come to the AIT campus for degree study. The final memorandum of agreement will be signed in Hanoi in early 1993.

Associated with the development of a Center outside Thailand has been a steady change in the nationality distribution of students coming to AIT. Students from Thailand remain the single largest group (now slightly more than 20%). The next largest groups come from China, Nepal and Vietnam, as well as from the traditional major student-sending countries namely, the Philippines, India and Indonesia. An increasing number of students are coming from countries like Laos, Cambodia, and Mongolia, while the short course programs reach even more effectively to the Pacific nation states and west Asia.

Annual Reports sometimes fail to portray the fact that a university is an assembly of human beings working in ways and under responsibility structures that are quite different from those in government or private corporations. Yet the interpersonal difficulties familiar in all universities seem to be lessened rather than magnified by the very international nature of the personnel. I think it is because most of us have become aware of these differences and do our best to overcome them. The effect is clearly visible in the student population and is, I think, one of the wonderful things about the Institute. It would be a shame if this aspect were to get lost in the mass of figures and data which comprise a report such as this one.

I am sure that readers will agree with me that 1992 was, again, a very successful year for the Asian Institute of Technology.
ACADEMIC DEVELOPMENTS

"AIT will take a leadership role in the promotion of technological change and its management for sustainable development in the Asia and Pacific Region, through high-level education, research and outreach activities which integrate technology, planning and management. The focus of the Institute's activities is in technology, with special emphasis on the interdisciplinary interface among the above three fields, and will include attention to environmental and socio-economic considerations."

AIT Mission Statement

Amalgamation of Academic Divisions into Schools

The Institute's determination to remain an active partner in Asia's technological development defines the rationale for the amalgamation of existing Academic Divisions into Schools.

While its scope is extensive, the amalgamation will be carried out rationally and will not be disruptive. For some of the existing Divisions, the process will be effortless and immediate, and will surely increase flexibility in academic activity while maximizing resource utilization. Other Divisions will require a phased amalgamation convergent with the evolution of curricular and related academic changes over a period of one year.

Response-to-needs rationale

The creation of the Schools by early 1993 demonstrates how the Institute, in its 33 years, has always been guided by the changing academic needs of the region, as well as by fluctuations in support provided by donors.

Growing from a single specialization in hydraulic engineering, at its foundation in 1959, AIT has expanded its teaching, research and outreach activities in four main areas: infrastructure engineering, agricultural and natural resource engineering, management and planning, and manufacturing systems engineering. These activities are carried out by ten Academic Divisions, two Interdisciplinary Programs, the School of Management (SOM), and six Centers.

Conversion of Divisions to Schools

The Academic Divisions, Interdisciplinary Programs and SOM will be amalgamated into four Schools, based on their thematic coherence. Each school will be headed by a Dean as academic, administrative and financial manager, working within delegated budgetary and academic autonomy.

The amalgamation will not directly affect the Centers, given the differences in the nature of their operations and the responsiveness of their present structures to market opportunities and client needs.

Four Schools

The amalgamation will create a school of civil engineering...
New Partnerships and Ventures

With PCEA

A noteworthy development in 1992 was the formation of a partnership with the Punjab Business Administration College in Lahore, Pakistan. The partnership agreement, signed in February 1992, allows qualified PCBA students to transfer credits to AIT’s MBA program and to graduate after four terms. If the pilot program involving six students is judged successful, the student intake may increase to 30 next year.

Similarly sized groups are expected from Indonesia and Vietnam in the near future.

Students on the project are self-supporting.

With WHO

The Division of Environmental Engineering was selected by the World Health Organization as one of six collaborating centers for water supply and waste disposal activities, for a four-year period starting in October 1992. As a collaborating center, the Division will participate in research, training, documentation, and information dissemination activities. On the advice of the Ministry of Public Health of the Royal Thai Government, Prof. Chongrak Polprasert, AEON Group Chair Professor, was appointed head of the Center.

Long-term benefits

The benefits to be derived from the proposed amalgamation are clear. Students will have easier access to Interdisciplinary learning paths, diverging from the relatively narrow and very discrete programs of the present fields of study.

For the faculty members, the amalgamation will offer opportunities for broadening and consolidating teaching and research in the new units. It will allow the evolution of academic expertise and educational offerings beyond the boundaries of the present academic division/field of study structure.

Improvements are expected in the efficiency of the Institute’s management structure, as a result of the greater autonomy and devolved authority given to the new Schools.

Other advantages are foreseen in the maximization of resources as faculty expertise is allowed more flexibility and becomes more cost effective, and faculty time spent on administrative matters and the costs of related administrative support staff are reduced.

With the University of Dortmund

The AIT/University of Dortmund M.Sc. in Spatial Planning for Regions in Growing Economies (SPRING) welcomed its first group of students on the modified program, under which students complete the first year of the two-year program in Dortmund. Since its inception, the program has successfully graduated two student intakes.

PCBA officials (from left) Prof. Shahid H. Shah, Associate Dean, and Prof. Sh. Atique-ur-Rehman, Dean, visited the Institute in January 1992 to sign the PCBA/AIT partnership agreement. They are photographed with President Alastair North and Prof. Ricardo P. Parra, Vice President for Academic Affairs.

SPRING students at the Dortmund University campus.
As the year ended, final negotiations were underway for the establishment of the AIT Center in Vietnam, the first branch of the Institute outside its campus in Thailand. AITC will consist of two branches, one in Hanoi and another in Ho Chi Minh City.

**Product Portfolio**

AITC will base its product portfolio on existing/emerging market needs in Vietnam and AIT’s areas of strength.

The branch in Hanoi, which is being assisted by the Finnish Government, will focus on management, industrial technology and agricultural technology. The Swiss Government-supported branch in Ho Chi Minh City will provide training in management development. The target groups are administrators of ministries and departments, instructors of universities and research institutes, and managers of private and state-owned enterprises.

English language training and computer applications will be integrated in the training modules.

**First Four Years**

In the first four years of operation, AITC’s work will focus on four main aspects: training programs, institutional development services, provision of equipment and facilities for the Center, and associated development/implementation of an operation and maintenance system.

AITC will offer specially designed short-term training courses, as well as regular 12-week programs, which could count for credits to regular degree programs at AIT.

AITC will be temporarily housed in the former office of the Ministry of Education and Training at 21 Le Thanh Tong Street, Hanoi. Its permanent headquarters will be constructed on a 50 ha plot of land near the Hanoi Agricultural University. Additional plots of land and facilities will be leased to the Center to establish field offices or stations.

The branch in Ho Chi Minh City will be based at the Ho Chi Minh City Polytechnic.

**New Degree Programs**

**Biotechnology**

Planning for the proposed program in Biotechnology moved further ahead, with expert consultants providing advice on appropriate curricula for Bioprocess Technology. A short course program has been scheduled for 1993. Construction of a building to house the program has begun.

**Pre-Master’s Bridging Program**

Work on the development of the Pre-Master’s Bridging Program continued. The program will bridge gaps in the first-degree education of students who come from disadvantaged backgrounds but whose academic qualifications meet the Institute’s minimum requirements. It will cover computer literacy, mathematics/statistics and science foundations. The program will be one of four academic areas to be conducted by the proposed Center for Language and Educational Technology (CLET). The three other areas are languages, learning teaching systems and general studies. The existing Language Center will be subsumed into this new center.
Faculty

In 1992 the Institute had 175 Faculty members of all categories, compared to 155 in 1991. Of these, 128 were engaged on a full-time basis with contracts lasting one year or longer.

In terms of academic ranking, the proportion of Full Professors in the full-time, long-term Faculty body rose from 14 per cent. in 1987 to 27 per cent. in 1992. The corresponding proportions for Associate Professors during the same period were 43 per cent. and 45 per cent., and 22 per cent. and 25 per cent. for Assistant Professors.

The regrouping of academic fields and amalgamation of academic units present individual Faculty members considerable scope for planning their career paths in the new structure, while also increasing their opportunity for joint appointments across fields or even Schools.

The international nature of the AIT Faculty body enhances technical and cultural interchange. Top photo shows Prof. Ricardo P. Pama, Vice President for Academic Affairs (extreme right), presiding over a Faculty meeting.

FACULTY STRENGTH AND DEVELOPMENT

- Some 32 nationalities are represented on the AIT Faculty, in approximately equal proportions from within and outside the Asian region.
- Of the 128 full-time Faculty, 60 per cent are direct hire and 40 per cent are seconded.
- The overall increase in the Faculty body is due mainly to the growing number of Affiliated Faculty and short-term Visiting Faculty, almost all of whom are externally funded.
- That AIT is regarded as a career institution by its core direct-hire Faculty is indicated by the 52 contract renewals in 1992.
- The strong market demand for science and technology experts continues to challenge the Institute’s recruitment and long-term employment of good faculty, especially in environmental engineering, computer science and other areas of specialization.

FACULTY NUMBERS

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<td>15 14 13</td>
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<td>138 135 141</td>
<td>141 144 147</td>
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STUDENTS

DEMAND-LED GROWTH OF ENROLMENT

- Demand-led growth explained increased enrolments in the School of Management and the Interdisciplinary Natural Resources Development and Management Program.
- In Industrial Engineering and Management, enrolment rose with the introduction of Manufacturing Systems Engineering. The corresponding figure in Telecommunications grew as the Division admitted its second student intake.

The program in manufacturing systems engineering provides hands-on training in advanced manufacturing technologies.

1992 Enrolment by Academic Division

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<th>IEM</th>
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Average Annual Enrolment

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TALKING TO AIT STUDENTS

SAQIB BHATTI, 27, is one of six students on the joint MBA Program offered by AIT and the Punjab College of Business Administration in Lahore, Pakistan.

Mr. Bhatti joined AIT from PCBA, which offers MBA programs in association with universities in the United States and Switzerland, and since 1991 with AIT. At the end of his first year at PCBA, Mr. Bhatti, who was the top student in his class, opted to continue his MBA program at AIT. "I am happy to have made the right choice," says Mr. Bhatti. "There are not that many universities which offer management of technology. More and more, MOT has become a very important field, particularly made so by the need to use technology for development and the emphasis placed on maintaining a sound environment.

"AIT provides students a unique opportunity to meet so many different people from various countries. Even when I sit and take a drink with friends, I always learn something new. Those who want to learn will find the diversity of culture, knowledge and experiences at AIT really quite remarkable."

"Personality development, which involves projecting a good image and communicating well, is as important as having a good head for business. Exposure to AIT's international community can contribute significantly in achieving this," he stresses.

"That AIT is located in Thailand is another advantage. This country is developing very fast and is attracting many European and American investments. There is no need to go to the West to learn how business is done there. We can learn that right here in Thailand and at AIT," he adds.

Mr. Bhatti's career plans offer him two options: pursuing a Ph.D. program, or setting up his own consulting firm on foreign investments. Definitely, his experience at AIT will help him reach a decision.
Trends in Doctoral Enrolment

The difficulty in obtaining support for Doctoral scholarships accounted for the small number of Doctoral students. Last year's Doctoral enrolment, which averaged 12 per cent of the total enrolment, fell short of the 20 per cent target.

Efforts to obtain scholarship support, as well as to improve the quality of the Doctoral program continued. The Doctoral Program Review Committee (DPRC), with new appointments to its chair and membership, pursued its rigorous monitoring of the program and the progress of students on it.

Together with the Academic Senate, the DPRC closely scrutinizes the official requirements and procedures for the Doctoral program. Particular attention was given to achieving the appropriate balance between coursework and research, and ensuring close and regular contacts between Doctoral degree candidates and their respective program committees.

STUDENT ENROLMENT HIGHLIGHTS

- Average term enrolment in the degree-awarding units rose by almost 9 per cent in 1992, to 915 students, compared with 841 in 1991.
- The full-time enrolment (including PCAD, and Talkbase programs) averaged 946, increasing by 5 per cent from the previous year.
- 24.6 per cent of the September 1992 enrolment were women, increasing from the 20 per cent reported in the same period last year.

1992 Full Time Enrolment

<table>
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<th>Term</th>
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<td>Sept</td>
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* All programs
** PCAD, HS, Talkbase

Doctoral dissertations during the year were given a positive evaluation by select teams of external examiners.

PATCHARAPORN YANIPRAT is a Doctoral degree candidate in Industrial Engineering and Management.

Seven years ago, Mrs. Patcharaporn obtained her Master's degree from AIT. Taking leave from her post as an instructor at Kasetsart University's Industrial Engineering Department, she returned to the Institute in September 1992, six months into her pregnancy, to start her Ph. D. program.

Mrs. Patcharaporn makes a point: women have as much ability and opportunity as men to pursue their career ambitions.

A mother of two children, a girl and a boy, Mrs. Patcharaporn gives a lot of importance to proper management of time, in her case proportioning time between family and studies.

"When I enrolled in the Doctoral program here, I knew that I would be required to take control and make good planning. I decided not to live on campus because I have my family to take care of. Luckily, my house is not far from AIT and my in-laws live nearby."

"A successful career need not result in failed family life," she insists. "At this time, I would like to focus on my study and family until my children grow up, and then I will devote my life to the society. To create a good society, we need to start from the family."

"By helping in the education of qualified engineers, I feel that I am making significant contributions to the development of Thailand. I hope to do this even better after my Doctoral studies. Moreover, I would like to get involved in new research that can benefit not only my students, but the country as a whole."
International Enrolment

The overall pattern of the Institute's international enrolment remained diverse but witnessed a number of changes in country representation in the student body.

As recently as 1984, the People's Republic of China and Vietnam had only around 10 students each in an enrolment of 630. In 1992, PRC (with 8 per cent of the enrolment) replaced Nepal and Vietnam (now fourth and fifth, respectively) as AIT's third highest student constituency, after Thailand (with over 20 per cent of the enrolment) and the Philippines (8 per cent).

<table>
<thead>
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<th>Country</th>
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Total* 920 925 1001

*Excluding Taikbase program
Student contribution to study costs

In the September 1992 term, the overall enrolment passed the one thousandth mark for the first time, reaching 1028.

While the increased enrolment was achieved without sacrificing academic standards, it caused an imbalance in Institute income and expenditure, much like a trend seen in 1990-91 when enrolment rose but the number of enrolled students for whom the Institute received fees actually dropped. To help defray increasing costs, the Institute may have to replace fee waivers with a fee reduction policy. Fees are waived for Institute employees and family members who wish to enrol, academically qualified self-supporting students on their fourth and fifth terms, and degree program students who extend beyond the period covered by their scholarships. Non-fee paying students accounted for 18 per cent of the total enrollment as of mid-November 1992.

The motivational and community-serving advantages of the fee-waiver policy are being studied in the light of pressures placed on Institute resources, at a time of considerable financial stringency.

Talking to AIT students

MANANDHAR UTTAM
KRISHNA, a 34-year old Nepalese, is a Doctoral degree candidate in Environmental Engineering.

"I plan to teach when I return to Nepal. I guess this is why I am here as a Doctoral student. I would really like to do something for my country, and I hope to be able to apply the knowledge and expertise I am gaining at AIT. For me, working in the developing countries offers great challenges, both professional and personal."

Mr. Manandhar did not take a serious interest in environmental issues until he joined trekking trips with expatriate colleagues in the Finnish Government-funded Hill Forest Development Project. "It was on these treks that I became fully aware of the environment." A civil engineer graduate from the Indian Institute of Technology in Madras, Mr. Manandhar was involved in the construction of roads and quarters for officers of the project. At the project's completion, Mr. Manandhar joined AIT's Master's program in Environmental Engineering. "I learned about AIT from friends at IIT."

His strong academic performance and favorable assessment by faculty won him admission into the Ph.D. program in 1990. His dissertation, "Sewage System as a Circulating Reactor," investigates the potential use of wastewater conveyance systems as treatment reactors. "It is a very promising project. So far, my experiments have yielded encouraging results. Such a system could be used to provide multi-purpose service, including transport and treatment. Definitely, the system can be used in small-scale operations and is an economical alternative to constructing a new treatment plant. In other cases, application maybe restricted to pre-treatment only."

"This topic came to me when I took special studies about sewage systems under Prof. Chongrok Polprasert and Mr. Hans Schoder. I then did an extensive literature search on the subject of treatment reactors."

CHIEN-MIN WU comes from Chinese Taipei. He is a self-supporting student of Geotechnical and Transportation Engineering.

"For AIT students, discipline and determination are very essential qualities, particularly for those who are financing their studies. I suppose, this makes me doubly proud about being here."

"What attracted me most to AIT is the acknowledged reputation of its geotechnical engineering program," recalls 31-year old Chien-Min Wu, explaining his choice of graduate school. Before joining AIT, Mr. Wu, who is a civil engineering graduate from Chung-Yuan University, worked for five years at CTCSI Corp., a major consulting firm in Chinese Taipei. "I had to study a lot of technical papers in the CTCSI library, and many of these were published papers and articles by Prof. Balasubramaniam, who, as we all know, is a respected geotechnical engineering expert, and other AIT faculty."

Mr. Wu describes studying at AIT as a period for "professional recharging. Engineers need this if they are to keep up with developments in the field. I find my own 'professional recharging' very challenging, I have long been out of the university and English is not my mother tongue. But it is certainly worth the time and money that I am investing. I am pleased with my Master's program in soil engineering. The faculty, the course arrangement and the laboratory equipment are of a very high standard."
### 1992 GRADUATES

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* One INRDM Diploma was awarded to a student from Myanmar.

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**GRADUATE RECORD**

- The increase was in the Master's program, which graduated 429 students in 1992 compared to 389 in 1991.
- The three largest groups of graduates came from Thailand (65 graduates), Philippines (44), and Vietnam (41).
- By division, the largest groups of graduates came from AFE (61 graduates), HSD (48) and GTE (44).
GRADUATION AWARDS

JAMES A. LINEN III MEMORIAL PRIZE
Established in 1993 in memory of Mr. James A. Linen, a Charter Founding Member and Life Member of the Board of Trustees (1967-88)

HISAMATSU PRIZE
Given from funds provided in 1982 by Prof. Yoshihiro Hisamatsu, former Dean of the Faculty of Engineering, University of Tokyo, and at present Adviser in Technology for Nisshin Steel Co. Ltd., Japan

TIM KENDALL MEMORIAL PRIZE
Established in 1981 from funds provided by the UK-AIT Appeal, in memory of Mr. R.M. Kendall, Member of the Board of Trustees (1971-81)

MAHESH VARMA PRIZE
Established from funds provided by Prof. Mahesh Varma, in recognition of the most outstanding graduate in structural engineering and construction

CHIN FUNG KEE PRIZE
Awarded from funds contributed in 1990 by the distinguished students of the late Prof. Chin Fung Kee, former Vice-Chancellor, University of Malaya, and past President of the Southeast Asian Geotechnical Society

TELECOM-FINLAND PRIZE
Given from funds provided in 1991 by Telecom, Finland

KEIDANREN AWARD
Established in 1990 with funds provided by KEIDANREN, this award is presented to female graduates in recognition of their outstanding academic performance

April
Mr. Altaf Hussain Wani (EE), India
Adviser: Dr. Y. H. Zhuang

Mr. Alan Dale C. Gonzales (SOM), Philippines
Adviser: Mr. Ragnar Soegaard

Mr. Indigahsa M.S. Sathysprasad (SEC), Sri Lanka
Adviser: Dr. S. Ogunlana/Dr. D. Arndt

Mr. Geekiyamage S.K. Fernando (GTE), Sri Lanka
Adviser: Prof. A.S. Balasubramaniam/ Dr. Y. Honjo

Ms. Nguyen Thi Tuan Anh (SOM), Vietnam
Adviser: Dr. K. Ramanathan

Ms. Sharon Basada Singzon (AFE), Philippines
Adviser: Dr. S. H. Upasena

December
Mr. Chavatna Sumetphong (CS), Thailand
Adviser: Dr. K. Kanchanasut

Mr. Bhanu Raja Neupane (HSD), Nepal
Adviser: Prof. K. E. Weber

Mr. Takashi Oga (IEM), Japan
Adviser: Prof. O. Fujiwara

Mr. Monzur Mushed Kabir (TC), Bangladesh
Adviser: Dr. A. Murch

Ms. H.B.C. Nishanthi De Silva (TC), Sri Lanka
Adviser: Dr. A. Murch
OUTREACH PROGRAMS

The Institute has been a trusted and experienced agent in the continued career development of Asian professionals engaged in management, engineering and technological fields. Its capability to provide a coherent and immediate response to the needs of both developed and disadvantaged countries in the region accounts for the continued success of its outreach programs. These include training courses, research projects, information dissemination activities and technical consultancies. While the majority of the outreach programs are carried out by the Academic Centers, a good number are also conducted by Faculty Members.

The Appendix lists the Institute’s 1992 portfolio of research projects (completed and on-going) and continuing education activities.

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1 = Journal Paper
2 = Conference Paper/Proceedings
3 = AIT Report (Research)
4 = Book/Chapter In a Book
5 = Total
6 = Others*

*Monographs, Working Papers, Reports, (including progress, interim, consultancy, etc.) Reviews, Division Research Report/Paper, Newsletters, Reference Material, Handbook of Courses, Lecture Notes, etc.
ASIAN DISASTER PREPAREDNESS CENTER

ADPC's development as an important focal point for the promotion of disaster management in the region continued through 1992, a fitting complement to the global observance of the International Decade for Natural Disaster Reduction.

As in previous years, the Center's 1992 programs consisted of three broad types of activities: general, technical and information.

The general program included disaster management courses (DMC) and workshops on improving cyclone warning response and mitigation. Technical support was provided to the Philippines' Core Shelter Project, sponsored by UNDP, and to UNDRO-funded advisory missions on relief operations after the eruption of Mt. Pinatubo, and on flood assessment in Cambodia. The Center assisted in national workshops, often initiated by former participants of ADPC courses.

ADPC carried out consultancies for UNDP in the Philippines, the Ministry of Relief in Coordination of Cyclone Rehabilitation in Bangladesh, and UNCHS in Nairobi, to assess cyclone damage in Apia, Western Samoa. It conducted post-disaster evaluations, as well as a study on disaster mitigation in Asia and the Pacific which was published at the request of ADB.

ADPC initiated two new programs in 1992. In the Private Sector Program, ADPC is collaborating with OFDA and USAID's International Disaster Advisory Committee, to stimulate and demonstrate the value of corporate-government-community cooperation in disaster management.

The OFDA-supported Shelter and Urban Development Program assists in the development of in-country programs for disaster preparedness and mitigation activities related to urban development and shelter.

ADPC works closely with government offices and NGOs and is a collaborating center of OFDA and UNDRO and its South Pacific Program Office. It has close links with UNDP, UNHCR, UNICEF, WHO, WMO, and other UN agencies.

Under the Directorship of Mr. Terry Jeggle, ADPC's general, technical and information programs will retain their emphasis on the relationships between disasters and the environment/development. Mr. Jeggle assumed office in November 1992, taking over from ADPC's founding Director, Lt. Col. Brian Ward, who has retired.

Left: After the earthquake in Indonesia in December 1992, ADPC assisted the UN in coordinating international donor response and helped local disaster officials in providing emergency shelter donated by USAID. Right: Talkbase students from Indonesia, Laos, Thailand and Vietnam.

LANGUAGE CENTER

In 1992 the Language Center launched several new initiatives in its outreach and on-campus programs.

In continued collaboration with the AIT Aquaculture Outreach Program, the Center expanded the range of its activities to include curriculum development planning at two agricultural colleges in Cambodia. Intensive language workshops with the Aquaculture Outreach in Northeast Thailand Project will also continue in 1993.

The Center will be fully involved with the SDC/AIT Project in Ho Chi Minh City, providing complementary language training alongside the management development program for Vietnamese students. The work will begin in March 1993 with an eight-week intensive program similar to the on-campus Talkbase program.

As 1992 approached its end, plans for the proposed AIT/RELC Conference were finalized. The two-day conference, Language Programs in Development Projects, will be held in April 1993 at AIT, bringing together teachers, language specialists, program planners and donor representatives, mostly from Southeast Asian countries. It will focus on current issues in language education in the context of national development.

The Center will likewise be actively involved in the proposed multi-disciplinary Pre-Master's Bridging Program. (See New Degree Programs on page 6).
CONTINUING EDUCATION CENTER

The wide range of training programs, consultancies and technical assistance carried out by CEC in 1992 reflects the Center’s proven capability to provide multi-faceted programs and services at the AIT campus or in the home country of client agencies/companies.

CEC training activities in 1992, each lasting from two to six weeks, are listed in the Appendix. These include 12 customized training courses, 18 international training courses, and 11 study trips cum seminars.

Other major activities in 1992 included consultancies related to the establishment of an Institute in the Indo-China countries, through the provision of training and research services.

In his capacity as Acting Director of the Hanoi-based AIT Center in Vietnam or AITCV, Dr. Nicanor Austraico, Director of CEC, undertook several missions to Vietnam during the year to participate in detailed discussions with officials from the Ministry of Education and Training and other government agencies and concerned educational institutions.

The AIT missions were jointly carried out with SDC and FINNIDA. AITCV is described in greater detail on page 6.

Other CEC consultancies in 1992 covered HRD planning and implementation, assessment of training needs, and development of strategies for language training.

Dr. Austraico

Continuing education programs cover a wide range of activities on various aspects of Asia’s development.

REGIONAL COMPUTER CENTER

RCC conducts training and consultancies as part of its growing outreach activities. In 1992, the Center fielded expert teams to Indonesia and the Philippines to conduct training in special client-oriented computer applications for government agencies and institutions. These training programs were in addition to the Center’s regular PCAD training activities on campus.

RCC consultancies in 1992 covered information design and implementation, systems integration and the development of database and data communications infrastructure. These were carried out for government agencies in several Asian countries.
LIBRARY AND REGIONAL DOCUMENTATION CENTER

Information professionals and subject specialists in four main topics namely energy, ferroconcrete, geotechnical engineering, and environment, are the target groups of outreach programs conducted by the Library and the four centers which make up LRDC.

INFORMATION MANAGEMENT

During the year, LRDC conducted 12 training programs for 88 participants from 21 countries. These included the final session of a four-week training course on repackaging, which was sponsored by IDRC for personnel of IDRC projects in 12 countries in the region.

In response to increased requests for admission, LRDC’s three-month course on new information technologies and computerized library services was held semi-annually, instead of annually. The course provided training in automated library systems, information services, and new telecommunication technologies for librarians, documentalists, and information managers.

ENERGY

The Regional Energy Resources Information Center (RERIC) distributed publications and information materials on energy and renewable energy sources to 400 members in 85 countries, mostly in Asia and the Pacific. The Center carried out Thailand-based surveys on existing and potential demand for energy and environmental information by small and medium-scale industries, for the UNIDO sponsored Energy and Environment Information System (EEIS) project, and on small-scale energy equipment manufacturers and suppliers for the Technology and Development Group, University of Twente, the Netherlands.

FERROCONCRETE

The transfer of ferroconcrete technology for development was the focus of activities carried out in 1992 by the International Ferroconcrete Information Center and its three networks.

Increasing its membership from 14 to 16 countries in Asia, the Middle East, Europe, Latin America and the Caribbean, the Ferroconcrete Information Network (FIN) completed an IDRC-funded project which included end-user ferroconcrete training programs and the production of various information materials, including computer- and video-based products. FIN expanded its activities by extending support to research projects.

IFIC’s Reference Centers Network now has 88 members in 45 countries the world over, while its Consultants Network has 200 members, mostly in Asia and Europe.

The networks, together with IFIC’s traditional outreach activities, have contributed significantly to the popularity of ferroconcrete in Asia, particularly in India, Indonesia, Malaysia and the Philippines, where national committees and local focal points for ferroconcrete technology transfer have been established.

ENVIRONMENT

The second phase of ENSICNET, which is supported by ADB as a technical assistance project with the Environmental Systems Information Center or ENSIC, started in February 1992. During the year, the project produced databases on environmental impact assessment studies in each of the six network countries, and published an Environment Index on their respective contributions up to December 1991. The Index also contains additions to the ENSIC database from January to June 1992.

A new ENSICNET subnet, China-Middle South, was established in Guangzhou in August 1992. Based at the South China Institute for Environmental Science, the subnet covers environmental protection and research organizations in six central and southern provinces.

Further network strengthening was discussed at ENSICNET meetings with Indonesian and Nepalese focal points.

In Vietnam, ENSICNET activities included training programs in Hanoi and Ho Chi Minh cities.

Completed and on-going ENSIC publications include environmental directories of experts, institutions and on-going environment-related projects for ENSICNET-Vietnam and ENSICNET-Nepal, a pocket guide on the bacteriological quality of drinking water for ENSICNET-Philippines, a directory of water and wastewater treatment equipment manufacturers for ENSICNET-China, and a directory of EIA studies for ENSICNET-Indonesia.
For-reaching changes in funding and resource generation concerns provided the impetus for efforts by the Institute's Development arm, to ensure support for the Institute's on-going programs and new ventures outside Thailand. Undertaken in the face of substantial cutbacks in support provided by some of AIT's traditional donor governments, these efforts concentrated on exploring new funding sources, particularly in Thailand, while maintaining long-term partnerships with other major donors and collaborators.

By the end of Fiscal Year 1991-92, contributions secured from the Institute totalled Baht 607,493,000, an increase of 12 per cent over FY'1990-91 receipts.

The FY 1991-92 receipts brought the cumulative contributions received since 1959 to Baht 6,190,032,000.

### TOTAL CONTRIBUTIONS
#### FY 1991 - 92 (Baht '000)

<table>
<thead>
<tr>
<th></th>
<th>Cash</th>
<th>Kind</th>
<th>Total</th>
<th>% Increase</th>
</tr>
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<tr>
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<td>276,494</td>
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<td>535,211</td>
<td>72,282</td>
<td>607,493</td>
<td>12.89</td>
</tr>
</tbody>
</table>

The large increase in capital grant is accounted for by grants for the construction of two buildings, namely Telecommunications (above) and Computer Science (below).

- Scholarships accounted for the largest cash contribution, followed by grants for continuing education and research.
- In-kind contributions consisted of two components: grants for equipment and books, and faculty/staff secondment.
RESOURCE GENERATION HIGHLIGHTS IN FY 1991-92

New partnerships with Thailand, AIT's host country

Thailand, one of the Institute's founding countries and a major donor in its 33 years, provided further support through three new programs. Secured since May 1992 were 14 scholarships under the Queen Sirikit Scholarship for Asian Environmental Development Program, 10 scholarships under the Thai Aid Program for Myanmar and Vietnam, and 14 scholarships annually for the next four years under the State Enterprise Human Resource Development/Recruitment Program.

AIT signed a joint Support for Staff Development Program (two-to-one scheme) with the Royal Thai Government. The Program will provide an annual grant of 20 million Baht for five years for Master's and Doctoral scholarships. AIT signed similar scholarship schemes with Rajamangala Institute of Technology and Thammasat University.

New cooperative programs were proposed in the latter part of 1992 to the Royal Thai Government. These are expected to provide 40 to 50 scholarship grants annually over the next two years.

Groundwork for the proposed science and technology park, the focus of another major partnership between AIT and the Royal Thai Government, further developed in 1992. Construction is expected to begin by early 1993.

Renewal of collaborative programs with eight donors, namely France, Japan, Norway, Finland, Spain, Philippines, Germany, and Procter & Gamble (Thailand)

Valued at approximately 13 million US dollars and covering a period of one to four years, these renewals stabilized the annual scholarship level at 400, and secured 26 faculty secondments (approximately 636 man/months) and general and special technical equipment.

Continuing negotiations for program renewals with other major donors

At the end of FY 1991-92 negotiations for program renewals were put forward to Sweden, Belgium, Austria, the Netherlands, EC, and the People's Republic of China. Annual renewals with France and Japan were also discussed.

FY 1991-92 CONTRIBUTIONS BY SECTOR

- Governments (75.25%)
- International Organizations (8.8%)
- National Government Agencies (5.28%)
- Business, Foundations, Private Sources (10.67%)

FY 1991-92 CONTRIBUTIONS INCREASED BY 12% FROM FY 1990-91

<table>
<thead>
<tr>
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<th>FY 1990-91</th>
<th>FY 1991-92</th>
<th>Increase</th>
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<tr>
<td>Cash</td>
<td>479,324,000</td>
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<td>58,322,000</td>
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<td>Total</td>
<td>539,146,000</td>
<td>607,493,000</td>
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</tr>
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</table>
Support for new ventures in Indochina

Support for the establishment of an AIT Center in Vietnam was provided by Switzerland and Finland. The Swiss-funded Ho Chi Minh branch will carry out a management development project. Finland provided a seed grant for the branch in Hanoi.

In Cambodia, AIT's outreach efforts were supported by the Swedish International Development Authority, which funded a preliminary study for a library development project for Cambodian institutions.

Towards building an AIT presence in Vietnam...
(Top photo). An exchange of letters between H. E. Mr. G. Fonjallaz, the Swiss Ambassador to Thailand, and AIT President North, signified the provision of support by SDC to the Institute's management development project in Ho Chi Minh.

(Right). FINNIDA support for the Hanoi branch was contained in a memorandum of understanding signed by the Finnish Ambassador to Thailand, H. E. Mr. Eero Kalevi Salovaara, and President North.

Establishment of new partnerships with the private sector

New partnerships with the private sector were developed, providing support for scholarships, seminars, exhibitions, and conferences.

Support for new academic programs at the AIT campus

Funding support of 3.6 million Baht has been obtained to fund start-up operations of the proposed Bioprocess Technology program.

TOTAL CONTRIBUTIONS CASH AND KIND FY 1959-92

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<tr>
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### FACULTY/STAFF SECONDMENTS
#### FY 1991-92

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<td><strong>Total</strong></td>
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</tbody>
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**From top:**

H. E. Mr. Johan Dahl, the Norwegian Ambassador to Thailand, and Dr. Thanat Khoman, Chairman of the AIT Board of Trustees, signed a cooperation agreement providing Norwegian support for 1992-1994.

Support for the partnership project between AIT and CIDA was presented by H. E. Mr. Arthur C. Perron, the Canadian Ambassador to Thailand, to AIT President North.

Mrs. A. Gaulther, French consultant to SEAMES, and Mr. Michel Deverge, Cultural Counsellor of the French Embassy in Bangkok (from left), presented the French Government's support for 1991-92 to Institute President Alastair North and Prof. Ricardo P. Pama, Vice President for Academic Affairs.

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H. E. Mr. Olov Ternstrom, former Swedish Ambassador to Thailand, bade farewell to AIT by presiding over the opening of the renovated environmental engineering laboratory. The renovation was funded by the Swedish Government.
COOPERATIVE PROGRAMS EXTENDED AND ESTABLISHED IN FY 1991-92

EXTENSIONS

France (annual)
- ET operations, research, training, faculty support
- ET faculty support, outreach activities
- SOM operations and development
- AIT project in Vietnam
- Remote sensing laboratory project
- Master's and Doctoral scholarships
- Doctoral scholarship in France
- Secondment of 3 senior and 2 junior experts, short-term mission

Japan (annual)
- Master's and Doctoral scholarships
- Grants for operations and equipment
- 13 long-term faculty secondments

Norway (1992-94)
- Master's scholarships
- Faculty secondment

Finland (1992-95)
- Master's and Doctoral scholarships
- Support to Telecommunications and AIT Center in Vietnam

Spain (1991-93)
- Master's scholarships

Germany (1991-94)
- Master's scholarships
- One-year scholarships for SPRING Asia Program
- Secondment of 6 faculty members
- Equipment grant

Philippines
- Grant for operations

Proctor & Gamble (Thailand)
- Master's scholarship

NEW PROGRAMS

Thailand (1992-95)
- Master's and Doctoral scholarships

Sweden
- Preliminary study for library development
  (Cambodia)

JFR Foundation, Education and Public Welfare Foundation (Thailand), Thai Farmers Bank
- Construction of Bioprocess Technology Building

Rajamangala Institute of Technology (1992-96)
- Master's scholarships for RTT faculty

From top: Australia's contribution to AIT was presented by Mr. David Barber, Counsellor of the Australian Embassy, to Institute President Alastair North. Also in photo are AIT Vice Presidents, Prof. Ricardo P. Pama (Academic Affairs) and Dr. Suvit Yodmanee (Development).

A five-axes MAHO milling machine was presented by H. E. Mr. J. Noirtalisse, the Belgian Ambassador to Thailand, and received by Prof. P. C. Pandey, IEM Division Chairman, Mr. Erik Bohez, CIM Lab Manager, and AIT President Alastair North (from left).

Filipino students supported by scholarships from Spain are photographed with H. E. Mr. Josue Villa (left), the Filipino Ambassador to Thailand, and H. E. Mr. Tomas Chavarrri (right), the Spanish Ambassador to Thailand.
ISSUES AND RECOMMENDATIONS

The number of internal scholarships has plateaued. To support increments in Institute expenditures, now averaging 10 to 13 per cent annually, greater attention should be given to increasing externally funded scholarships coming from the private sector, as well as from bilateral or multilateral funding for human resource development in various Asian countries.

Partnerships with American foundations should be further explored. Under study by the American Schools and Hospitals Abroad Foundation is a funding request for the construction of a building for the Center for International Business and Private Enterprise, to be based at AIT.

Support from Asian countries for mutually beneficial collaboration bear great potential. Such relationships should be explored with various Asian countries, through bilateral/multilateral funding agreements for human development activities. Potential partnerships are seen with Pakistan, Bangladesh, and Indonesia.

Promotional and marketing efforts should be intensified and targeted at attracting externally funded or self-paying students from key countries in Asia. These efforts should employ mixed media, including awareness campaigns, exhibitions, lectures and symposia in relevant institutions, and dissemination of information materials on AIT's academic and outreach programs.

Left photos, from top:
On behalf of the Thai Government, Dr. Saisuree Chutikul, Minister to the Prime Minister’s Office, presented a scholarship grant valued at 100 million Baht to support Thai students over the next five years. From left: AIT President North, Dr. Panom Pongpaibool, Secretary General of the Office of the National Education Commission, and AIT Vice President for Academic Affairs, Prof. Ricardo P. Pama.

Support to the AIT Endowment Fund was presented by the Pakistani Ambassador to Thailand, H. E. Maj. Gen. (Ret.) Riaz Mahmud.
AIT President North and AIT Vice President for Academic Affairs, Prof. Ricardo P. Pama, were on hand to receive grants from the Philippines and India. H. E. Mr. Josue Villa, Ambassador of the Philippines to Thailand, accompanied by Mrs. Sonia Brady, Minister Counselor of the Philippine Embassy, presented over one million Baht to the Institute’s operating fund. The Indian Government’s donation of agricultural equipment and technical books was presented by H. E. Mr. A. N. Ram, the Indian Ambassador to Thailand.
### Governments

<table>
<thead>
<tr>
<th>Country</th>
<th>Amount</th>
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</thead>
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### International Organizations

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### National Government Agencies

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<td>Bangladesh International Center for Diarrhoeal Disease Research</td>
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<td>Fiji Forum Secretariat Housing Authority</td>
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<td>Finland Posts Telecommunications</td>
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<td>Germany Dortmund University</td>
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<td>Ministry of Transmigration Petra Christian University</td>
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<td>Atmaia University, Jogjakarta</td>
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<td>Japan National Space Development Agency</td>
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</tbody>
</table>

### Other Contributors

- Malaysia Mara Institute of Technology 0.03
- Ministry of Education 0.24
- National Productivity Cooperatives 0.01
- Public Services Department 0.04
- Sarawak Agricultural Development Project 0.08
- Nepal Mechi Hill Irrigation and Related Development Project 0.01
- Nepal Resources Management Project 0.01
- Philippines Mandala Agricultural Development Cooperative 0.03
- National Economic and Development Authority 0.02
- Papua New Guinea Dept. of Agriculture and Livestock 0.01
- Pakistan Punjab College of Business Administration 0.06
- Singapore National Productivity Board 0.01
- Sri Lanka Integrated Rural Development Project 0.06
- Irrigation Department 0.02
- Land and Water Management Resources Center 0.03
- Mahewa Authority 0.01
- Mirp Irrigation Management Division 0.10
- Ministry of Policy Planning and Implementation 0.02
- Ministry of Public Administration 0.04
- National Water Supply and Drainage Board 0.00
- Rural Development Training and Research Institute 0.01
- Sri Lanka Export Development Board 0.01
- Sweden Royal Institute of Technology 0.03

The first Nishiura Sanitation Research Scholarship was awarded to Thai student Mr. Morchai Wengkarmka of the Environmental Engineering Division by Mr. Eiji Nishiura, Chairman of Nishiura Environmental Sanitation Research Corp. Ltd. Also in photo are Dr. Suvit Yodkum,AIT Vice President for Development; and Mr. Yoshinari Tanaka, NESR Section Manager.
Business and Foundations

A.P. Vander Berg Machinefabriek B.V. 0.01
Angkor National Laboratory, USA. 0.12
Antecen, Inc., USA. 0.05
Bangkok Airways Co. Ltd. 0.02
Bang Pa-In Paper Mill Industry Co. Ltd. 0.01
Bangkokang Industry Park 3 Co. Ltd. 0.01
C.C.F. International Sri., Italy. 0.01
Charoen Pokphand Co. Ltd. 0.05
Chinese Petroleum Corp., Chinese Taipei 0.08
CIM Co. Ltd. 0.18
Consolidated Management Service Ltd. 0.06
Centrifuge Instrumentation Equipment Ltd. 0.01
Data Products Toppan Noor Co. Ltd. 0.02
Dawidz Consortium., JV. 0.14
Decca VN, Finland 0.04
Deloite & Touche, Malaysia 0.03
Dharmapala University 0.01
Diakonisches Werk Der Evang. Erbsa Corp. 0.05
Ericsson Telecom Corpor. Far East 0.03
ETC Technical Assistance Team II 0.07
Exostarz Travel Co. Ltd. 0.03
Ezono Chemical Geologists, UK 0.01
Fuji Construction Co. Ltd. 0.01
Fujis Xerox Co. Ltd., Japan 0.03
Geco Singapore (Private) Ltd. 0.03
Geotech Co. Ltd. 0.01
Geotechnical Holland, B.V. 0.01
German Construction Ltd. 0.01
Gausihe Machinefabriek, B.V. 0.01
Ground Treatment System F.E. Pte. 0.01
Hawlet Packard (Thailand) Ltd. 0.01
IBM A/P/G 0.14
IBM Thailand Co. Ltd. 0.02
Index International Group Co. Ltd. 0.05
International Development Consultant Services, Sweden 0.02
Italhi Industrial Co. Ltd. 0.01
IWACO Consultant for Water and Environment 0.05
Kay Thai Co. Ltd. 0.01
Kio Jiban Consultants 0.02
Kumagai Gumi Co. Ltd. 0.01
Lyonnais Des Buux, France 0.15
M.D.X. Co. Ltd. 0.01
Malaysian Examination Syndicate 0.05
Manga Foundation Co. Ltd. 0.01
Metro Politan Agriculture and Concrete Pits Co. Ltd. 0.01
Mitsubishi Research Institute Inc. 0.06
Miung Roong Ltd. 0.01
Nishinbashi-Mitsubishi Consortium 0.02
Nokia Telecommunications 1.38
Norconsult International A.S. 0.02
Northwest Hyd. Consultants Inc. 0.27
Obayashi Corp., Japan 0.12
Okunynimche Studiens Week E.V. 0.05
P.T. Arun Ngl. 0.03
P.T. Bataviaan Dien Konsultant, Indonesia 0.05
P.T. Krakatau Industrial Estates 0.02
Petronas National Bhd., Malaysia 0.06
Piccon Engineering Bhd. 0.01
Polyfied Gene Synthesis Sdn. Bhd. 0.27
Seagate International Ltd. 0.15
Shinwa2 Daemon Co. Ltd. 0.01
Soi Cussell 0.17
Siam Cement Co. Ltd. 0.10
Siam CNC Works Co. Ltd. 0.01
Simon Hdg. 0.01

Snaboa, Paris, France 0.04
Snowy Mountain Engineering Corp., Laos 0.02
Sri Lanka Water Ltd., Thailand 0.02
Solitarsie (Thailand) Co., Ltd. 0.01
SPA Project Management Co. Ltd. 0.01
Taiwan Cement Corp. 0.08
Taiwan Power Co. 0.19
Tajuy Rosgo Corp., Japan 0.01
Tektronix Inc., USA. 0.50
Telekom Malaysia 0.02
Tenneo Swiss 0.03
Tenniacst, Switzerland 0.01
Thai Airways International 0.01
Thai CFT Co. Ltd. 0.01
Thai Engeer. Engg. Consultant Co. Ltd. 0.01
Thai Farmers Bank 0.07
Thai Nishinbashi Construction Co. Ltd. 0.01
Thai Wai Co. Ltd. 0.16
TNO Building and Construction Research (Netherlands) 0.01
Toyoosa Co. Ltd. 0.02
W.F. Schmidt, Stuttgart, Germany 0.02
AEON Group Environmental Foundation, Japan 0.30
AIT Foundation Inc. 0.09
Asia Foundation 0.01
Education and Public Welfare Foundation, Thailand 0.36
Ford Foundation Inc. 0.03
John F. Kennedy Foundation, Thailand 0.04
Ksfaniere (CRECC) 0.17
Lee Foundation Inc. 0.05
Menne Foundation Inc. 0.02
Rockefeller Brothers Fund Inc. 0.19
Sakaiwa Peace Foundation 1.08
South East Asia Foundation Inc. 0.02
Winrock International 0.14
AADC Cooperation Office 0.00
AITAA 0.27
Asea-Canada Forest Tree Seed Center 0.04
Arctic Renaissance Research Association 0.15
Bangladesh-Canada 0.04
Agriculture Sector Team 0.04
Care, Dhaka 0.12
Chulabhorn Research Institute, Thailand 0.04
International Centre of Swedish Labour Movement 0.05
Japan-Indonesia Science and Technology Forum 0.03
Kenya-Canada Energy Division Project 0.03
Korea-Canada Energy Project 0.03
PACT, Bangladesh 0.02
Philippine-German Chamber Cooperative Program 0.01
Robert Bosch 0.01
Redd-Hanna, Thailand 0.02
Sawood-Laos PDR 0.03
Thai-German Project Management 0.01
World Concern Korea 0.01
World Council of Churches 0.02
World Vision of Bangladesh 0.04

Private and Others 0.14

Sub-total 10.67

Total 100.00
Distinguished Alumni Award

The Distinguished Alumni Award recognizes alumni contributions to development at the community, national and regional levels. Deserving alumni will be selected from the following categories: rural development, public sector, business, academic and research excellence, and international affairs.

The nomination and selection of alumni will be based on criteria to be formulated by the AITAA Executive Committee in collaboration with the AITAA Chapters.

THE AIT ALUMNI -
the pride, honor and success of the Institute

Since the first graduation in 1981, AIT has produced over 6,000 graduates from 33 countries. The more senior of them have established and accomplished careers in government and the private sector. The majority live in Asia and are directly engaged in the development of the region, as government officials and administrators, educators, officials of international organizations and NGOs, and managers in the trade, business and industry sectors. Many have become entrepreneurs, others have entered politics and are now recognized leaders in their respective countries.

The AIT Alumni Association places the greatest priority on strengthening its communication links with all alumni, directly or through the 17 AITAA Chapters. From its new offices in the Administration Building at AIT, the AITAA Secretariat sees to the task of mobilizing alumni support for the work of the Institute, and promoting the Association among presently enrolled students. At the Institute, a tradition of "gift giving to AIT" was introduced in 1992 among the graduating classes in April, September and December. Conducting a variety of fund-raising activities, they collected over $25,000 Bahri and presented the amount as their first gift to their Alma Mater.

The renewed and revitalized interest in AITAA, among the alumni and students, is evident. AITAA membership is on the rise, with 69 per cent of all AIT students joining the Association upon graduation. The increase provides a healthy outlook for AITAA. This augurs well for the Association's future.

TALKING TO AIT ALUMNI

Whether in the service of their governments or as self-employed entrepreneurs in their home countries, the AIT alumni are making significant contributions to the development of Asia.

Mr. Laxman Prasad Ghimire (CRD '72) is the State Minister for Water Resources in Nepal. A successful self-employed entrepreneur, prior to entering politics, Mr. Ghimire, together with three colleagues from the Road Department in the Ministry of Works and Transport, founded East Consult P Ltd. 20 years ago, turning it into one of Nepal's largest consulting firms engaged in irrigation works, socio-economic studies and other development-related topics. Mr. Ghimire is the founding President of AITAA-Nepal Chapter.

Prof. Pham Phu (WRE '82) of Vietnam has been elected Member of Parliament representing Ho Chi Minh City. Prof. Phu is also Chairman of the Division of Industrial Management at Ho Chi Minh Polytechnic University. He has been actively supporting AIT in the establishment of the Institute's Swiss-funded management development project in Ho Chi Minh City.

Worthy causes, such as the education of promising Asians, has benefited from the support given by AIT alumni. In her capacity as President of AITAA Thailand, Mrs. Chuanpit Dhamasiri (EE '68), Deputy Governor of the Metropolitan Waterworks Authority, donated a grant to the Queen Sirikit Scholarship for Asian Environmental Development Program, which was established by AIT on the occasion of Her Majesty the Queen's 60th birthday. Mr. S. J. Lee (EE '75), President of Super Max Engineering Co. Ltd., also donated a grant.
AITAA Governing Board Meeting

The 21st Annual Meeting of the AITAA Governing Board was hosted by AITAA-Japan. It was held on March 13 to 17, 1992 at the Overseas Vocational Training Center in Tokyo. The next Governing Board meeting will be held in Hong Kong and will be hosted by the AITAA-Hong Kong/Macao Chapter.

The establishment of a Distinguished Alumni Award was proposed at the 21st annual meeting of the AITAA Governing Board. The meeting was attended by the Executive Committee of AITAA together with representatives from 11 national chapters of AITAA.

The meeting also raised the need for guidelines for the allocation of interest generated from the AITAA Endowment Fund and the investment of AITAA reserve funds. So far, 35 alumni have contributed a total of 362,593.72 Baht to the Fund. An additional 120,751 Baht have been pledged.

PUBLICATIONS

1992 Alumni Directory

The updated AIT Alumni Directory, covering a total of 5911 graduates from 1961 to December 1992, will be released in February 1993.

AITAA PROJECTS

SUPPORTING STUDENT RESEARCH

To supplement research funds made available by the academic divisions, AITAA awards grants to a number of students to cover air travel and incidental expenses related to investigation and data collection. The 1991-92 awards were presented in September 1991 and September 1992.

The September 1991 recipients were GTE students, Ms. San San Win (Burmese) and Mr. Liang Xin (Chinese), and EE student, Mr. Tajuddin Bantacut (Indonesian). The three graduated in April 1992. Another recipient, IEM student Dr. Nguyen Luong Bach (Vietnamese), graduated in December 1992. The September 1992 recipients were GTE student Ms. Cherry Clarissa Ramieñitas (Filipino), a candidate for graduation in April 1993, and AFE Doctoral student Mr. Nguyen Tang Ton (Vietnamese).

The AITAA research grants are worth a maximum of 600 US dollars each.

BUILDING CAREERS

Alumni Recruiter Program

Individual alumni, serving as contact points, are assisting AITAA Chapters in disseminating information on AIT and establishing “student feeder” organizations. Particular attention is given to information on AIT’s admission requirements. This program is actively pursued by AIT alumni in Pakistan, the People’s Republic of China, and India.

Alumni Credential Files

To assist new graduates, AITAA sponsors recruitment programs for companies based in Thailand and overseas. In 1992, business companies from Singapore and Chinese Taipei, as well as Thailand, conducted job placement tests and interviews on campus. Graduating students are encouraged to open credential files with the AITAA Secretariat. These will be used as reference for job placement opportunities.
AUSTRALIA
Dr. Victor A. Polmante (SGC '62)
School of Civil Engineering
University of New South Wales

BANGLADESH
Mr. Karimul Haque Talukdar (WRE '71)
Project Officer
ADB Resident Office, Dhaka

BRUNEI
Mr. Yong Foh Fui (EE '75)
District Water Engineer
Water Section, Public Works Dept.

CHINESE TAIPEI
Mr. George S.Y. Chen (CRD '72)
Director General, Highway Bureau

HONG KONG/MACAO
Mr. Ted T.C. Chan (CRD '76)
Managing Director
TESCO, Causeway Bay

INDIA
Dr. Ashok Kumar Gupta (CRD '71)
Professor and Coordinator
Transportation Engineering
University of Roorkee

INDONESIA
Mr. Martsanto Dirdjoseprapto (WRE '90)
Deputy Head Officer
Riau Development Coordinating Office
Ministry of Public Works

JAPAN
Mr. Naoki Tanaka (GTE '85)
Project Engineer
Japan Highway Public Corp.
Miyamae-ka, Kawasaki-Shi

REPUBLIC OF KOREA
Dr. Seung-Hwan Lee (IEM '75)
Professor
Transportation Engineering Dept.
Ajou University
ALUMNI DISTRIBUTION
1961 - 1992

Southeast Asia and Pacific

Brunei 2
Borneo 8
Cambodia 3
Fiji 1
Indonesia 291
Laos 7
Maldives 1
Malaysia 256
Myanmar 95
PNG 6
Philippines 627
Singapore 28
Thailand 1420
Vietnam 176

East Asia

PRC 140
Chinese Taipei 684
Hong Kong 84
Japan 49
Korean 96
Macao 5

South and West Asia

Afghanistan 26
Bangladesh 405
Egypt 1
India 424
Iran 12
Nepal 280
Pakistan 436
Sri Lanka 457
Turkey 6

North America, Europe and Africa

Canada 4
Ethiopia 1
France 3
Germany 1
Ghana 2
Honduras 1
Kenya 1
Malawi 2
Netherlands 1
Sweden 1
Tanzania 7
United Kingdom 2
USA 7
Stateless 1

MALAYSIA
Mr. Mah Lok Abdullah (JEM '84)
Assistant Director
National Productivity Center Selangor

NEPAL
Mr. Pramod Pradhan (CS '82)
MENRIS, CIMOD Kathmandu

PAKISTAN
Mr. Iqtidar A. Chaudhri (WRE '84)
Managing Director Delta Tyre and Rubber Co. Ltd. Islamabad

PHILIPPINES
Mr. Edgar Ortega (WRE '76)
Vice President DCCD Engineering Corp. Metro Manila

SINGAPORE
Mr. Ho Siew Koon (WRE '71)
Senior Principal Engineer Housing and Development Board

SRI LANKA
Mr. W. J. S. Fernando (ET '82)
Station Manager Sapugaskanda Power Station Hwwanuwa

THAILAND
Mrs. Chuanpib Bhamasiri (EE '58)
Deputy Governor (Engineering) Metropolitan Waterworks Authority Bangkok

USA
Dr. Raksh Sarnas (CTE '60)
Consulting Engineer Geologist/Geophysicist Hinsdale, Illinois
CENTrAL
ADMiniSTRaTiON

COMPUTERIZATION OF CENTRAL ADMINISTRATION FUNCTIONS

As part of the campus-wide computerization of administrative operations, a local area network (LAN) was set up in the Physical Plant Department.

In the Finance Department, computer software upgrades improved cashier functions and the monitoring of the scholarship program. Starting in January 1992, scholarship statements were prepared on a per-term basis. Relevant computer training was provided to all Finance staff concerned.

Major changes are envisaged in 1993, as a result of the migration to the DEC minicomputer from the mainframe and the accompanying migration of financial software systems.

The installation of a computerized payroll system linked to the human resources management information system of the Personnel Section is expected to be completed in 1993.

NEW FACILITIES AND SERVICES

Efforts to improve the Institute's water and electric power supply resulted in the installation of a new bore hole pump and a new chiller machine with a 500-ton capacity. The new chiller was installed in September 1992, significantly reducing energy consumption on campus.

Two new generators, each with a capacity of 850 KW, were added raising the total available in house power to 3300 KW. The new generators should meet the energy demands of all the academic units, in case of power interruptions.

Fourteen general-use vehicles were purchased without any burden on the AIT budget. These vehicles will be self-paying.

Further improvements are planned. Under consideration are the installation of additional generators to provide emergency power for all residents on campus (in case of power interruptions), a better water treatment facility, and a new automatic fire alarm system.

The Petroleum Authority of Thailand is planning to set up a petrol station on campus, providing fuel products at discounted rates to AIT.

ANNUAL USER SURVEY

The 1992 annual user survey of services provided by offices under Central Administration showed general concern for campus security. It noted improvements in services provided by the Instrumentation Unit, Electrical and Airconditioning Section, 24-Hour Service Section, Cafeteria and Telecommunications Section. The Finance Department, which was included in the survey for the first time, received the highest overall rating.

Maintenance of the campus grounds, motor pool operations and supervision of housing and accommodation facilities are major central administration functions.
CAMPUS DEVELOPMENT

CONSTRUCTION PROJECTS COMPLETED

Construction of ten three-bedroom townhouses and the AIT Center Annex was completed. The AIT Center now has a total of 117 guest rooms.

Construction work in the Administration Building included the renovation of the Registry and the addition of a second floor to the middle section of this building to provide office space for Academic Affairs and Development staff.

The GTE and EE laboratories were also renovated.

CONSTRUCTION PROJECTS IN PROGRESS AND PROPOSED

Biotechnology Building

Funding: Various sources of donation, to fund the basic building shell, special utility works, and installation of equipment.

Target completion date: August 1993.

Squash Court

Located near the sports pavilion on the west side of the AIT campus, the squash court will be built to practice court standard.

Funding: Grants from Pakistani and AIT.

Target completion date: April 1993.

ST-7 Staff/Faculty Housing

ST-7 will consist of two blocks, A and B. Block A will have six one-bedroom apartments, 12 two-bedroom apartments and six three-bedroom apartments. Block B 24 will provide 24 studio/bedroom units and 42 bachelor's units.

Funding: 35 million Baht (internal loan from General Reserve to Housing Reserve)

Target completion date: September 1993.

Extension of WRE Office

The Water Resources Engineering offices will be extended north of the hydraulic laboratory and will be linked by a footbridge to existing offices. The new Irrigation Engineering and Management offices on the ground floor will be given direct access to the hydraulic laboratory. The building will occupy a total area of 950 to 1,000 sq.m.

Funding: 12 million Baht from the Royal Thai Government.

Schedule for tender: January 1993.

CIM - Laboratory

The proposed building will accommodate the Computer Integrated Manufacturing laboratory and classrooms and offices for the Division of Industrial Engineering and Management Program.

Proposed building area: 1,100 sq.m.
1992 INSTITUTE
ADMINISTRATION

SENIOR
ADMINISTRATIVE
OFFICERS

President
Vice President for Academic Affairs
Vice President for Development
Bursar
Academic Secretary

Prof. Alastair M. North
Prof. Ricardo P. Pama
Dr. Suvit Yodmanii
Mr. Edward Mayer
Dr. Roger Hawkey

DIVISION CHAIRMEN

Agricultural and Food Engineering
Computer Science
Energy Technology
Environmental Engineering
Geotechnical and
Transportation Engineering
Human Settlements Development
Industrial Engineering
and Management
Structural Engineering
and Construction
Telecommunications
Water Resources Engineering
School of Management

Dr. C.Kwei Lin
Prof. Huynh Ngoc Phien
Prof. R.H.B. Exell
Mr. Hans Schroder
Dr. Yusuke Honjo
Dr. A.T.M. Nurul Amin
Prof. P.C. Pandey

Prof. Yukio Aoyagi
Prof. A.B. Sharma
Prof. Ricardo Harboe
Dr. Patrick Gougeon (Director)

COORDINATORS OF
INTERDISCIPLINARY
PROGRAMS

Irrigation Engineering and
Management
Natural Resources Development
and Management

Mr. Rainer Loof
Dr. Laurence A.G. Moss

CENTER DIRECTORS

Asian Disaster Preparedness
Center
Continuing Education Center
Library and Regional
Documentation Center
Regional Computer Center
Regional Research and
Development Center
Language Center

Mr. Terry Jeggle
Dr. Nicanor C. Austriaco
Mr. Arthur Vespy
Dr. Charoon Chirapaisarnkul
Dr. Suvit Yodmanii (in charge)
Mr. Matthew Laszewski (Chairman)

STUDENT AFFAIRS

Dean of Student Affairs
Student Union President

Prof. Pama, appointed April '92, succeeding Prof. Helmut Eggers
Dr. Savit, appointed May '92, succeeding Prof. Ricardo P. Pama
Dr. Kwei-Lin, appointed July '92, succeeding Dr. Sarah Ilanognticleko
Prof. Phien, appointed September '92, succeeding Dr. Vilas Wuwongse
Prof. Aoyagi, appointed August '92, succeeding Prof. Worsak
Dr. Moss, appointed September '92, succeeding Dr. Howard Daugherty
Mr. Jeggle, appointed November '92, succeeding Lt. Col. Brian Ward (Ret.)
Dr. Savit, in-charge May '92, succeeding Mr. Prida Thimakorn
Mr. Chaivatna, succeeding Mr. Wu Tern Siang, who served as SU President
from May '92-December 92.
Mr. Shaunak Ashtaputre, succeeding Mr. Chaivatna, will serve as SU President
from January '93- August '93
1992
BOARD OF TRUSTEES

H.E. Mr. C. Christian W. Adams CMG (1995)
Ambassador Extraordinary and Plenipotentiary
British Embassy
Bangkok, Thailand

Mr. Robert C. Bodden (1995)
President
AIT Foundation Inc.
USA

Mr. Pandit Bunyapana (1995)
Permanent Secretary for Finance
Royal Thai Government
Bangkok, Thailand

Prof. Khunying Nongyao Chaiserl (1993)
Former Rector
Thammasat University
Bangkok, Thailand

Mr. Ph. Chakkaphak (1995)
President and Director
Finance One Ltd.
Bangkok, Thailand

Prof. Ashoka Chandra (1993)
Director
Institute of Applied Manpower Research
New Delhi, India

Prof. Srisakdi Charmonman (Ex-officio)
President, AITAA
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B.A., Thammasat; M.S., Ph.D., Hawaii.

CS
Surasong Awustanamongkol
B.S., Chulalongkorn; M.S., Georgia Inst. of Tech.; Ph.D., Southern Methodist.

Gerard Huet
M.S., Paris; M.S., Case Western Reserve Univ.; Doctorat d'Etat, Paris VII.

Geir F.H. Skjelstad
M.Tech., Norwegian Inst. of Tech.

Andrew L. Wendelbom
B.S., Ph.D., Adelaide.

G. Yulu
B.Sc., M.Sc., Ph.D., Univ. of Science and Technology.

EE
Lec Scoung-Kent
B.Sc., M.S., Ph.D., Seoul National Univ.

Zhuan Ya-hui
B.S., Tsinghua; Ph.D., Moscow.

ET
Ronald D. Johnson

Eddy A. Mesritz
M.Sc., Delft.

Nonita T. Yap
B.Sc., Sun Carlos; M.E.S., Dalhousie; Ph.D., Alberta.

GTE
Yuzu Akatsuka
B.Eng., Tokyo; M.Eng., California; D.Eng., Tokyo.

Ronald G. Gordon

Soren Holmberg
B.Eng., M.Sc., Technical Univ. of Denmark.

Yudhbir
B.Sc., Chandigarh; M.Tech., IIT, Bombay; Ph.D., Cornell Univ.

HSD
D.K. Banwet
B.E., Burdwan; M.E., Calcutta; Ph.D., IIT (New Delhi).
A.B. Etherington
B.Arch., Cornell; M.A., Hawaii;
M.E.P., Ph.D., M.Arch., McGill;
Ph.D., Hawaii.

V. Seify Pendaruk
B.E., M.S., British Columbia;
M.S.C.E., Ph.D., Washington.

Ira M. Robinson
B.A., Wesleyan; M.A., Ph.D., Chicago.

J. Ruland
B.Sc., M.Sc., Ph.D., Freiburg.

Samuel O. Russell
B.Sc., M.Sc., Ph.D., Belfast.

George G. Van Der Meulen
M.Sc., Amsterdam; Ph.D., Tilburg.

IEA
Dezchck N. Batsanov
B.S., M.S., Ph.D., Technical Univ., Sofia.

D.A.H. Deschoolmeester
B.Eng., M.B.A., Ph.D., Gent, Belgium.

Jan Goosenacerta
B.Phil., Ph.D., Cathole Univ. of Leuven.

Gerit K. Jansens
B.S., M.S., Antwerp; M.S., Ghent;
Ph.D., Brussels.

B. Katalinic
Dipl.-Ing., M.Sc., Ph.D., Univ. of Zagreb,
Austria.

Francis E. Kennedy
B.S., Worcester Polytech.Inst.;
M.S., Stanford; Ph.D., Rensselaer

Hugo Pastina
B.Eng., M.Eng., Royal Military
Academy, Brussels;
M.Eng., Catholic Univ. of Leuven.

Peter Rousseuw
Ph.D., Brussels.

SEC
B. Ozawa

Steve M. Rowlinson
B.Sc., Nottingham; M.Sc., Imperial
College, London; Ph.D., Brunel Univ.

Pennung Warnitchal
B.S., Chulalongkorn;
M.Eng., D. Eng., Univ. of Tokyo.

SOM
Erkko Antti
M.Sc., Helsinki Univ. of Tech., Finland.

Zong Tae Bae
M.S., Ph.D., KAIST.

Atpol Bhanichsupapipool
B.A., Carleton; M.A., Northeastern;
Ph.D., Carleton.

Patrick Gousseon
Docteur d’Etat., Caen, France.

Jyothi P. Gupta
B.Tech., IIT, Kharagpur; Ph.D., Manchester.

Jae-Ho Hyun
B.S., Hanyang Univ.; M.S., Ph.D., KAIST.

Young-Suk Hyun
B.S., MBA, Seoul National Univ.;
Ph.D., KAIST.

Manesh G. Korgaonker
B.E., Bombay;
M.Tech., Ph.D., IIT (Bombay).

Agathe Mecercon
B.Sc., Nantes; M.Sc., Paris 7;
Docteur d’Etat, Paris 11.

Bruno Ponson

David Wheeler
B.A., M.B.A., Ph.D., Texas Tech.

TC
Leslie T.M. Berry
B.Sc., Ph.D., Dip.Sec.Ed., Adelaide

Lauri Karikoski
M.Sc., Telecom Finland.

WRS
Sheng Liang
B.S., National Chung Hsing Univ.;
M.S., Univ. of Hawaii;
Ph.D., Univ. of Florida.

Ashwani K. Randev
B.Sc., Himachal Pradesh Univ.;
M.Sc., Ph.D., Himachal Pradesh K.V.U.

Kuniyoshi Takeuchi
B.E., M.E., Tokyo;
Ph.D., North Carolina.

INRDM
Ian R. Crain
B.Sc., M.Sc., McGill;
Ph.D., Western Ontario.

Peter J. Dooling
B.A., B.P.E., (Hons.), M.A., Univ. of
Alberta; Ph.D., Colorado State Univ.

William Shalinsky
B.A., B.S.W., McGill;
M.Sc., D.S.W., Western Reserve.

IREM
Gideon Oron
D.Sc., Israel Inst. of Tech.
1992 PORTFOLIO OF SPONSORED AND CONTRACT GRANT RESEARCH

In Progress

○ AGRICULTURAL AND FOOD ENGINEERING

Dehydration of Tropical Fruits and Vegetables using a Refrigeration System: Dr. Ashapol AIT Research Initiation Grant (Baht 45,000)

Cashewnut Processing at Farm Level Dr. Ashapol; CIDA/AIT-CUC PP (Baht 110,000)

AIT Aquaculture Outreach: Interactive Field Trials with Farmers in Northeast Thailand (Phase II) Prof. Edwards; ODA (US$42,450)

Biological and Economic Characterization of Fertilization and Supplementary Feeding Regimes for Small-Scale Pond Aquaculture Prof. Edwards; Dr. Yokpuitijjate ODA (US$50,000)

Beef and Dairy Cattle Production Systems in Southern P-sarn Dr. Garber; CIDA/AIT-CUC PP (Baht 100,000)

Water Hyacinth Harvester Prof. Gee-Cough AIT Physical Plant (Baht 600,000)

Engine Driven Potato Digger with Oscillating Blade for Small Farm Use Dr. Wolf, IIT Haifa; USAID (US$200,000)

Farmer-Driven Electrostatic Low Volume Sprayer Prof. Gupta, Prof. Singh, Dr. Manor, IIT Haifa; USAID (US$200,000)

Tropical Spice Oleoresin Extraction Demonstration Unit for Women’s Groups; Dr. Irgantiteke CIDA/AIT-CUC PP (Baht 100,000)

Design and Development of a Natural Color Extractor to Extract Colors from Tropical Fruits; Dr. Irgantiteke AIT Research Initiation Grant (Baht 49,700)

Development of an Oleoresin Extractor to Extract Products from Tropical Fruits and Spices Dr. Irgantiteke Ranysitt Group Ltd. (Baht 61,000)

Irradiation as a Combination Post Harvest Treatment to Increase Shelf-life of Tropical Fruits of Economic Importance: Dr. Irgantiteke IAEA Austria (Baht 121,953)

Computational Skill Development in Food Processing Engineering Prof. Jindak CIDA/AIT-CUC PP (Baht 95,000)

Survey and Analysis of Rough Rice Properties Data: Prof. Jindak CIDA/AIT-CUC PP (Baht 75,000)

Pond Dynamics/Aquaculture Collaborative Research Supportive Program: Dr. Ketel Lin, Dr. Knud Hansen; USAID (US$108,000)

Introduction and Development of Channel Catfish Culture in the Tropics: Dr. Ketel Lin Chonburi Pkphond Inc., Thailand (Baht 2,838,513)

Strategies for Fish Seed Production Dr. Little; ODA (US$255,000)

Use of Leguminous Leaves as Fish Pond Inputs; Dr. Littel. Dr. Yokpuitijjate, Prof. Edwards USAID (Baht 3,624,475)

Evaluation and Selection of Agricultural Engineering Inputs for Rural Development in Asian Developing Countries: Prof. Moohua AIT Research Initiation Grant (Baht 80,000)

Development of a Procedure for Identifying Environmental Hazards in Large Irrigation Systems: Dr. Murty AIT Research Initiation Grant (Baht 42,000)

Finishing the Development of Agricultural Experimentation Station Prof. Nielsen; DANIDA (Baht 282,700), Prof. Nielsen (Baht 80,000)

Fertilization System on Computer Prof. Nielsen; DANIDA (US$ 2,600)

Environmental impact of Small-scale Aquaculture Dr. Phillips; ODA (US$ 10,000)

Environmental Assessment and Management of Aquaculture Development in Asia-Pacific Region Dr. Phillips; FAO (US$ 14,000)

Environmental Impact of Shrimp Farming on Two Coastal Districts in Southern Thailand: Dr. Phillips National Environment Board and Network of Aquaculture Centers in Asia Pacific (NACA - support in kind)

Integration of Aquaculture into Asian Natural Resource Systems Dr. Phillips; ODA (US$ 127,500)

Improving the Performance of Hand Tools and Equipment Used by Women in Agriculture ( exploratory Phase II) Dr. Sieldkhe CIDA/AIT-CUC PP (Baht 75,000)

Conventional Farming System and its Development in Southeast Asia Dr. Sieldkhe; Ministry of Education, Japan (Baht 100,000)

Development of a Front-Mounted Hydraulic Mower; Dr. Sieldkhe Sangyo Riken Co., Ltd., Japan (Baht 140,000)

Preparation of Two-Course Books Dr. Sethad, Dr. Weibel GTZ (Baht 125,000)

Evaluation of Mechanical Harvester for Sugarcane in Thailand Prof. Singh, Mr. Pathekk Wang Kanan Sugar Group, Bangkok (Baht 300,000)

Improvement of Vegetable Production Systems under Biological Methods of Pest Control; Dr. Upacena, Dr. Weibel GTZ (Baht 1,860,000)

Development of Feeding Systems for Fish and Integrated Duck-Fish System: Dr. Yokpuitijjate, Dr. Little IDRC (CADS 150,000)

○ COMPUTER SCIENCE

Development of a Marking Algorithm for Apparel CAD Using Generic Algorithms; Dr. Vitas MOSTE (US$ 36,000)

○ ENERGY TECHNOLOGY

Fluidized Bed Black Liquor Combustion Dr. Bhattacharya, ADEME (Baht 80,000)

Strategies of Rational Energy Use in Developing Countries Dr. Dong; EC (US$ 52,000)

Utilization of Biomass for Power Production: Dr. Bhattacharya, Mr. Schroder Danish Embassy, Bangkok (US$ 6,000)
Policy Analysis and Institutional Systems Strengthening in the Context of Technology Dissemination to improve Energy Efficiency in ASEAN Countries; Dr. Dang EC and ASEAN (US$ 445,000)

Energy and Environment Management Strategies: Options Analysis; Dr. Dang French Govt., UNEP (FF 950,000)

Solar Refrigerator Demonstration Prof. Exell; CIDA (Baht 104,000)

Solar Radiation Calibration Center Prof. Exell; CIDA (Baht 72,800)

Asian Energy News Prof. Lejeune, Dr. Zhai, Dr. Hua AFME/ADME (FF 150,000)

Energy Demand Forecast Model Prof. Lejeune, Dr. Zhai, Mr. Sushil MOPA, AFME/ADME, AIT (FF 480,000)

Energy Demand 1991-1992 Prof. Lejeune, Dr. Zhai, Dr. Arsegainto, Dr. Rasa, Mr. Sushil MOPA, AFME, AIT (FF 350,000)

REDP-Project PI (Sectoral Energy Demand Analysis); Prof. Lejeune, Dr. Zhai, MOPA, UNDP/ESCAP, ADME (US$176,000)

Designing Demand-Side Management Programs in a Developing Country: Problems and Prospects; Prof. Lejeune, Dr. Sushil MOPA (FF 11,000)

Energy-Cum-Electricity Demand and Supply Analysis; Prof. Lejeune, Dr. Zhai, Dr. Shrestha, Dr. Chauveau, Dr. Lapillone, Dr. Flaxon; AIT/GOI of France (Trust Fund) (US$ 600,000)

Energy Environment Study in ASEAN Prof. Lejeune, Mr. Boub, Mr. Sushil, Ms. Tsritip CEC thru AEEMTRC (US$ 5,000)

Policy Analysis of Energy Pricing in Selected Asian Countries Prof. Lejeune, Dr. Shrestha MOPA (FF 11,000)

Energy Planning on-the-job Training for the People's Republic of China Prof. Lejeune, Dr. Zhai, Dr. Shrestha, Dr. Lapillone; ADB/GOI of France (Trust Fund) (US$ 95,000)

Total Energy Management in Commercial Buildings; Dr. Mohanty, Mr. Pandya ADME (US$ 10,000)

Application of Heat Pumps in Drying Processes; Dr. Mohanty, Mr. Thaovilayang ADME (US$ 3,000)

Development of User-friendly Software for Rational Use of Energy Dr. Mohanty, Mr. Poloso ADME (US$ 8,000)

Boilers in Industry; Dr. Ogurev, Prof. Mora; Bobcock Co. (US$ 30,000)

Thesis Support Prof. Mora; SAAM/LED (US$ 8,000)

Advanced Soda Pulping Prof. Mora; Midixuleur (US$ 130,000)

Rational Use of Energy; Prof. Mora, Dr. Mohanty ADME (US$ 16,000)

Energy in Industry Prof. Mora; MOPA (US$ 40,000)

Energy Park Maintenance Dr. Supachat French Govt. (Baht 420,000)

Industry and Environment Dr. Visvanathan, Prof. Mora ADME (US$ 40,000)

Evaluation of SOLCO Solar Water Heater; Dr. Supachat SOLCO/THAI Co. Ltd. (Baht 25,000)

Performance of a Hybrid System Pilot Plant for Anaerobic Digestion of Pig Manure Dr. Tentscher; KL GTZ (DM 40,000)

Evaluation of Canadian Biogas Plants; (3 Phases) Dr. Tentscher CIDA/AIT-CUC FP (Baht 150,000)

ENIRONMENTAL ENGINEERING

Photocatalytic and Anaerobic Degradation of Halogenated Hydrocarbons Dr. Tanaka JICA (Baht 200,000)

Upgrading of Advanced Anaerobic Bioreactors for Treatment of Low to High Strength Wastewaters Dr. Harada, Dr. Fujii ARRA, Japan (US$ 5,000,000)

Thermophilic Treatment of High Strength Wastewaters by Modified Uplow Anaerobic Sludge Blanket Reactor Dr. Harada, Dr. Fujii KOMATSU, Japan (Baht 349,440)

Water Pollution Analysis of Klongs in Bangkok; Dr. Fujii JICA (Baht 250,000)

Membrane Technology and Ozone Research Project; Mrs. Samarn, Prof. Mora CIDA (Baht 120,000)

Sewage Purification Through Aquatic Plants; Dr. Verink GTZ (DM 233,750)

Application of Pilot-filter Unit for Contact Filtration of Surface Waters and Biological Filtration of Wastewaters Dr. Visvanathan; RTG (Baht 60,000)

Biological Detoxification of Hazardous Wastes; Prof. Chongkrak AEOI Group Environment Foundation, Japan (US$ 44,000,000)

Detoxification of Toxic Organic Wastes (Petrochemical Sludge) by Land Treatment Process Prof. Chongkrak ADME (Baht 200,000)

Assessment of Insecticide in Vegetable Production Systems: Maximum Residue Levels; Dr. Verink, Dr. Waibel, GTZ (Baht 372,000)

Biomass for Power Production: Mr. Schroder, Dr. Bhuttacharya DANIDA (Baht 150,000)

Chromium Recovery from Tannery Wastewater; Dr. Visvanathan CDG (Baht 349,000)

Hazardous Waste Management Dr. Visvanathan, Prof. Mora ADME (Baht 860,000)

Application of Pervaporation Membrane Technology in the Electronics Industry; Dr. Visvanathan Industrial Estate Authority of Thailand (Baht 60,000)

Appropriate Wastewater Treatment Systems for a Small Village on the Chao Phraya River Bank Mrs. Samarn, Dr. Visvanathan UNDP/CIDA (Baht 260,000)

GEOTECHNICAL AND TRANSPORTATION ENGINEERING

Environmental Geotechnical Engineering Problems in Southeast Asia (Phase II) Dr. Honjo JICA (Baht 220,000)

Improvement of Poor Quality Backfill on Soft Bangkok Clay with Tenax Geoid Reinforcement Dr. Bergado Tenex SpA, Como, Italy (US$ 30,000)

Reinforced Embankment with Poor Quality Backfill Soil Using Polyeffect Geotextiles on Soft Bangkok Clay Dr. Bergado Polyeffect, Austria (Baht 5, 254, 075)

Feasibility Study on the Utilisation of Double-deck and/or Articulated Buses in Bangkok; Dr. Yodphol, Dr. Shintzakaj BMTA (Baht 400,000)
Future Bus Requirements for BMTA
Dr. Yordphol, Dr. Shinazaki, Dr. Merit BMTA (Baht 150,000)

Stress-related Stability Analysis of Powerhouse Cavern and Tailrace Tunnel of Lam Ta Khlong Pumped Storage Project; Dr. Noppadol ATT Consultants Co. Ltd., EGAT (Baht 126,000)

Investigation on Landslides and Protective Measures for Southern Thailand; Dr. Noppadol CIDA/ATT-CUC PP (Baht 100,000)

Artificial Recharge as a Bangkok Land Subsidence Control; Prof. Prinya, Dr. Noppadol; IDRC (Baht 3,079,800)

Transportation Management in Asia Dr. Hokas; JICA (Baht 326,305)

Present and Future of Transportation Network in Developing Economies (Phase II); Dr. Shinazaki; Mitsubishi Research Institute, Inc. (Baht 300,000)

Development of Transportation Planning Methods for Developing Countries Based on an Analysis of Transportation Systems in Asian Countries Dr. Shinazaki; JICA (Baht 100,000)

Suitable Soil Stabilization Technique for Concrete Block Pavement for Bangkok Subsoils; Dr. Noppadol Concrete Products and Aggregates Co. Ltd. (Baht 100,000)

Sand Compaction Piles on Soft Bangkok Clay Using Locally-Available and Low-Quality Soils; Dr. Bergado, Dr. Horjoe, Prof. Belasubramaniam FUDO Construction Co., Tokyo (Baht 912,000)

\[ \Box \text{HUMAN SETTLEMENTS DEVELOPMENT} \]

Environmental Impact Assessment Study on Informal Sector Economic Activities in Bangkok; Dr. Amin CIDA/ATT-CUC PP (Baht 175,000)

Informal Sector Seminar/Conference Dr. Amin CIDA/ATT-CUC PP (Baht 100,000)

Development of an Accommodation Model for Urban Informal Economic Activities in Bangkok; Dr. Amin CIDA/ATT-CUC PP (Baht 150,000)

Land Management for South Asian Cities; Mr. Archer CIDA/ATT-CUC PP (Baht 75,000)

Urban Land Pooling/Readjustment in Asia-Pacific Countries; Mr. Archer Metropolitan Research Trust (Baht 50,000)

Agricultural and Rural Development in Northeast Thailand Dr. Demaine, Mr. Phahoon CIDA/ATT-CUC PP (Baht 150,000)

Development of Ban Puay, Puay Noi Minor District, Khon Kaen Province Dr. Demaine, Magaysay Foundation (Baht 253,000)

AID Aquaculture Outreach (Field Trials and Promotion of Small-scale Aquaculture in Northeast Thailand) Prof. Edwards, Dr. Demaine, Dr. Little, Mr. Innes-Taylor, Mr. Guirrteen ODA (Phase I: 1998-92: $654,000)
ODA (Phase II: 1992-96: $600,000 - beginning Dec. 92)

Small-Scale Aquaculture in Lao PDR Dr. Demaine, Prof. Edwards, Dr. Little, Mr. Innes-Taylor, Mr. Guirrteen CIDA (2,000,000)

Fishery Sector Review of Lower Mekong Basin; Dr. Demaine, Prof. Edwards, Dr. Phillips, Mr. Suchint (Rosetsart), Dr. Degnbol, Dr. Suerdinap-Jensen; DANIDA (US$ 302,000)

Development of Ban Khok Kong, Na Chauk District, Mahasarakham Province; Dr. Demaine, Mr. Prida, Mr. Chantarawarakthi; Green E-sarn Project; (Baht 1,250 Million)

Reconnaissance Studies for Rural Development in Aquaculture in Indonesia; Prof. Edwards, Dr. Demaine, Dr. Little, Dr. Phillips, Mr. Innes-Taylor, Mr. Guirrteen SIDA (US$ 200,000)

Chinese Students on Social and Gender Equality Dr. Kelkar, Ms. Nathan CIDA/ATT-CUC PP (Baht 70,000)

Women and Land Systems in Asia Dr. Kelkar, Ms. Yuvwon NORAD (Baht 75,000)

Women and Natural Resources Dr. Kelkar, Ms. Mishra NORAD (Baht 75,000)

Handbook on Planning and Building Legislation: ASEAN Countries Mr. Kammeier; IDRC (US$ 90,000)

Demonstration Project: Rural-Regional Planning in Thailand Mr. Kanmeier, Dr. Somruede CIDA/ATT-CUC PP (Baht 500,000)

High Strength Interlocking Concrete Blocks; Mr. Lefebvre, Mr. Kretzsch (KMIT) CIDA/ATT-CUC PP (Baht 150,000)

Housing through Small-Scale Building Component Industries Mr. Lefebvre, Mr. Reddy CIDA/ATT-CUC PP (Baht 267,828)

Pre-stressed Joists; Mr. Lefebvre CIDA/ATT-CUC PP (Baht 75,000)

Floating Foundation; Mr. Lefebvre CIDA/ATT-CUC PP (Baht 250,000)

Field Testing Kit Mr. Lefebvre, Mr. Reddy CIDA/ATT-CUC PP (Baht 75,000)

Latrine Improvement for Slum Areas in Bangkok; Mr. Lefebvre CIDA/ATT-CUC PP (Baht 75,000)

AID Alumni 1961-92 Employer Study [Round III]; Prof. Weber, Dr. Mich GTZ (US$ 16,000)

Applicability of Urban Transportation Planning Methodology to Developing Countries Dr. Nokannara; JICA (Baht 192,000)

Regional Analysis of an Emerging Metropolis: Cuttieck Bhubaneswar City Region in Eastern India - Case Study; Dr. Routray AID Research Initiation Grant (Baht 44,000)

People's Image of Development (the Way a Rural Community Wants to Develop Itself); A Cross-Cultural Exploratory Project; Dr. Setty CIDA/ATT-CUC PP (Baht 75,000)

Developing Agro-Enterprises in Rice-based Farming Systems Among Rural Women in Asia: A Cross-Cultural Exploratory Project; Dr. Setty CIDA/ATT-CUC PP (Baht 75,000)

Economics of Using Non-metallic Mineral Products for Housing Construction in Thailand Dr. Wickramasinghe CIDA/ATT-CUC PP (Baht 63,000)

Growth and Performance of Township Enterprises in China Dr. Wickramasinghe CIDA/ATT-CUC PP (Baht 77,000)

Provision of Urban Public Services in Abidjan, Ivory Coast Prof. Parenteau Human Sciences Research Council, Canada (CAD$ 67,000)
Privatization in Old French Colonial Countries [Hanoi, Vietnam]
Prof. Parentue; CIDA/ATC/CUC PP, University of Montreal (CAD$ 32,000)

Strategy for Enabling Women to Strengthen their Role in Development
Prof. Weber, Ms. Rosi, Ms. Ponjuan GTZ, CIDA/ATC/CUC PP (US$ 7,000)

Pre-Disaster Assessment of Physical and Socio-Economic Impacts
Prof. Weber, Dr. Demaine, Col. Ward CIDA/ATC/CUC PP (US$ 3,000)

Computer Application Package for Survey Format Design
Prof. Weber, Mr. Tseke GTZ (US$ 12,000)

GIS Application to Land Use Management and Planning in Watersheds
Prof. Weber, Dr. Thaya GTZ (US$ 15,000)

Planning for Field Cropping Cost Efficiency under Irrigation
Prof. Weber, Mr. Maskey GTZ (US$ 3,000)

Regional Environmental Planning including Anthropogenic and Organic Factors
Prof. Weber, Dr. Thaya GTZ (US$ 15,000)

Gender Analysis with Focus on the Advancement of Women in the Development Process
Prof. Weber, Mrs. Shrestha GTZ (US$ 10,000)

Area Development Planning in the Vicinity of Nature Conservation Parks
Prof. Weber, Mr. Nepal CIDA/ATC/CUC PP (US$ 5,000)

Low-Income Rental Housing in Bangkok (In collaboration with NHA)
Dr. Yip; CIDA/ATC/CUC PP, IDRC, NHA (Baht 2.5 Million)

Industrial Pollution Control and Applications
Dr. Nagarur CIDG (Baht 1,200,000)

Analysis of Strategic and Operations Management
Prof. Taboucz, Prof. Panyay, Dr. Najjar
SEAGATE Thailand, Toparik Plant (Baht 70,000)

APEC-HRD Industrial Technology Network (Hurdili) for Thailand/AIT
Dr. Tao AIT Research Initiation Grant (Baht 500,000)

INTERDISCIPLINARY NATURAL RESOURCES DEVELOPMENT AND MANAGEMENT PROGRAM

Assessment of ERS-1 Radar Data for Tropical Agriculture
Dr. Aschbacher; ESA (Baht 500,000)

ASEAN Remote Sensing Training Package
Dr. Aschbacher; ESA, EC (Baht 500,000)

Bioaccumulation of Contaminants of Lake Songkhla Basin
Dr. Bergsson CIDA/ATC/CUC PP (Baht 60,000)

Application of GIS for Agricultural Development in Amphoe Phattana, Nokum and Chai Badan, Changwat Lop Buri; Dr. Apisit National Research Council of Thailand (Baht 444,000)

Agro-ecological Zonation of Khwan Noi Valley, Upper Mae Klong Area, Kanchanaburi Province: Ms. Srisa Arng, Dr. Rangskjai; Dr. Apisit, Kasetsart University (Support assistance in kind)

Regional Human and Natural Resources GIS Database, Design and Development
Dr. Lukens CIDA/ATC/CUC PP (Baht 100,000)

Strategy for San Juan Pueblo's Heritage Resources, Dr. Moss State of New Mexico, Santa Fe, USA (Baht 750,000)

Beyond Tourism: Amenity Migration, A Global Comparative Study, Dr. Moss International Cultural Resources Institute, Santa Fe, USA (Baht 150,000)

Amenity Migration in Asia: Emerging Centers, Dr. Moss CIDA/ATC/CUC PP (Baht 170,000)

Amenity Migration in Eastern Europe: Re-emerging Centers, Dr. Moss; Center for Research and Development, U.S.A., USA (Baht 125,000)

IRRIGATION ENGINEERING AND MANAGEMENT

Operation of Complex Reservoir Systems
Prof. Haroe; GTZ (Baht 2,340,000)

Improved Operation and Management of Large-scale Irrigation Systems
Mr. Loof; Dr. Paudyal GTZ (Baht 3,406,305)

Irrigation Performance Evaluation
Mr. Loof; Dr. Ongsa; CIDA/ATC/CUC PP (Baht 75,000)

GIS-Based Groundwater Model Study
Prof. Gupta, Dr. Ongsa; CIDA/ATC/CUC PP (Baht 75,000)

Paddy Field Engineering in Asia
Dr. Kono; JICA (US$ 9,600)

Development of a Procedure for Identifying Environmental Hazards in Large Irrigation Systems
Prof. Murty AIT Research Initiation Grant (Baht 48,000)

Finishing the Development of Agricultural Experimental Station
Prof. Nielsen; DANIDA, Prof. Nielsen (Baht 80,000)

Fertilization System on Computer
Prof. Nielsen; DANIDA (US$ 2,600)

MANAGEMENT OF TECHNOLOGY

Managing with New Manufacturing Technologies
Dr. Ramakrishnan AIT Research Initiation Grant (Baht 20,000)

Technology Transfer and Development in Developing Member Countries
Prof. Sharif, Dr. Ramakrishnan ADB (US$ 175,000)

Comparative Leadership in ASEAN
Dr. Swierczek (Thailand Team Leader) University of Brunet (US$ 150,000)

STRUCTURAL ENGINEERING AND CONSTRUCTION

Material Testing for Don Muang Tollway Project, Dr. Pichai, Mr. Chaiat DTWIDAC Construction JV (Baht 250,000)

Determination of Design Values of Loads in Structural Design Codes
Dr. Sugiyama, JICA (Baht 171,388)

Utilization of Lignite Ash to Roller Compacted Concrete
Prof. Aneyagi, JICA (Baht 172,514)
Completed

○ AGRICULTURAL AND FOOD ENGINEERING

Assessment of a Low-Cost Fertilization/Supplementary Feeding System for Small-Scale Farmers
Prof. Edwards; ODA (€ 60,133)

Human Excreta Reuse in Aquaculture
Prof. Edwards; ODA (€ 39,716)

Feeding Value of Green Fodder for Herbivorous Fish
Prof. Edwards; ODA (€ 70,037)

AIT Aquaculture Outreach: Interactive Field Trials with Farmers in Northeast Thailand (Phase I)
Prof. Edwards; ODA (€ 654,921)

Improving the Performance of Agricultural Vehicles and Implements in Wet Paddy Fields
Prof. Goo-Claugha; Dr. Saloske
EC (US$ 128,000)

PC-Based Decision Support System for In-Store Drying and Aeration of Rough Rice
Prof. Jindoal
CIDA/AFRC/CUC/PP (Baht 95,000)

Development of Fry Production and Nutrition Strategies for the Nile Tilapia (Oreochromis niloticus)
Dr. Little; ODA (€ 50,676)

Muscovy Ducks
Dr. Little; Prof. Edwards
IDRC (CAD$ 111,700)

Demonstration and Popularization of Use of Enamel Coated Belt-on Plates for Cage Wheels - Phase II
Dr. Saloske; Prof. Goo-Claugha
CIDA/AFRC/CUC/PP (Baht 75,000)

Improving the Performance of Hand Tools and Equipment Used by Women in Agriculture (Dairy Exp - Phase I)
Dr. Saloske
CIDA/AFRC/CUC/PP (Baht 75,000)

Improving the Performance of Hand Tools and Equipment Used by Women in Agriculture (Demonstration - Phase I)
Dr. Saloske
CIDA/AFRC/CUC/PP (Baht 75,000)

Promotion of Jab Seeder (Thailand)
Prof. Singh, Mr. Chaipaphat
IDRC (CAD$ 18,094)

Testing of Rice Planters
Prof. Singh
Starnatt Limited, Thailand (Baht 100,000)

Environmental and Social Costs of Pesticide Use in Asian Vegetable Production Systems
Dr. Wahtai, Dr. Upasena; GTZ (Baht 1,202,000)

Fish Nutrition
Dr. Athiwat; IDRC (CAD$ 172,000)

○ COMPUTER SCIENCE

Development of An Expert System Model
Dr. Vlas; UNU (US$ 12,000)

○ ENERGY TECHNOLOGY

Research on Strategies
Dr. Dang; French Govt. (FF 580,000)

Regulation, Institutional Structure and Performance of the Electricity Sector
Dr. Dang; EC (US$ 53,000)

Strengthening ASEAN Capabilities in Energy Audits and Technology Information Development
Dr. Dang; EC (US$ 525,000)

Energy and Environment Management Strategies: Issues Assessments and Methodology Development
Dr. Dang; French Govt. (FF 620,000)

Effective Utilization of Low Temperature Geothermal Heat
Dr. Mohanty, Mr. Palomo
EGAT, AFME (US$ 6,000)

Rational Use of Energy in Industries
Prof. Mora, Dr. Mohanty
ADEXE (US$ 50,000)

Membrane Technology
Prof. Mora; UA CNRS (US$ 6,000)

Energy and Environment: Prof. Mora
CNRS, FICPS (US$ 14,000)

Clean Combustion
Dr. Bhutacharee, Prof. Mora
French Embassay, Manila (US$ 5,000)

Water Supply Network
Prof. Mora; LED-SAAM (US$ 20,000)

Integrated Technique for Sludge Handling in Water Treatment Plants
Mrs. Saworn, Mr. Sorpong, Prof. Mora
CIDA (CAD$ 10,000)

Energy and Environment Cooperation with Canadian Industrialists
Prof. Mora, Dr. Mohanty
CIDA (CAD$ 10,000)

Environmental Implications and Economics of Selected Electricity Planning Strategies
Dr. Shrestha
CIDA/AFRC/CUC/PP (Baht 75,000)

Energy Demand-Side Management
Dr. Shrestha, Prof. Lefaire
MOPA (FF 11,000)
Establishment of Energy Performance Standard for Buildings
Dr. Sunpong, Dr. Supachart
Dept. of Energy Affairs (Baht 960,000)

ADB - AIT Cooperation
Prof. Lejeune, Dr. Zhai; ADB (US$ 10,000)

Planning for Natural Gas Utilization in Thailand
Prof. Lejeune, Mr. Delafosse
AFME (FP 200,000)

Comparative Study on Residential Energy Demand in Asia
Dr. Zhai
Prof. Lejeune, AFME (US$ 150,000)

ASEAN Energy Environment Training
Prof. Lejeune, Mr. Mistry
Mr. Sushil, Ms. Tuntilp
EC through AFEMTHC (US$ 3,000)

ENVIRONMENTAL ENGINEERING

Integrated Pollution Control Measures for Small Tanneries
Dr. Zhuang, Dr. Nagarur
CDG (Baht 250,000)

Use of Membrane Technology in Treating Backwash Wastewater Produced at Bangkhen Water Treatment Plant
Prof. Mara; CIDA (Baht 75,000)

Integrated Technique for Sludge Handling
Mrs. Sanorn, Prof. Mara
CIDA/AVT-CUC PP (Baht 75,000)

GEOTECHNICAL AND TRANSPORTATION ENGINEERING

Development of Under-Reamed Piling Technique and Equipment for Foundations of Low-Rise Houses/
Structures in Low-Lying Marshy Areas Consisting of Organic Clay and Peat Deposits
Prof. Balasubramaniam, Dr. Bergodo; UNDP through UNCHS (US$ 30,000)

In-Service Analysis Procedure of Geotechnical Coupled Analysis
Phase II: Dr. Horjo RisoeJena Consultants Co. Ltd., Japan (Baht 320,000)

Stability and Ground Movements in Excavation Works in Soft Bangkok Clay
Dr. Noppadol
AIT Research Initiation Grant (Baht 55,000)

Use of Inextensible and Extensible Reinforcement for Mekong River Bank Stabilization
Dr. Bergodo
CIDA/AVT-CUC PP (Baht 75,000)

HUMAN SETTLEMENTS DEVELOPMENT

Informal Sector Dissemination/Demonstration Project
Dr. Amin
CIDA/AVT-CUC PP (Baht 175,000)

Urban Informal Sector in Sustainable Urban Development
Dr. Amin
CIDA/AVT-CUC PP (Baht 125,000)

Information Systems for Sub-National Level Planning
Prof. Das
SIRING Asia Program (US$ 6,000)

Women in the Thai Construction Industry
Dr. Kelkar, Ms. Rast, Dr. Sagarita, Ms. Austriaca, Ms. Kusakabe
CIDA/AVT-CUC PP, NORG (Baht 150,000)

Women and Forests in India
Dr. Kelkar, Ms. Misra
NORG (Baht 90,000)

Incorporating Women's Concerns into District Planning
Dr. Kelkar, Ms. Yuwakun, NORG (Baht 90,000)

DATABASE on AIT/HSD Student Research (1975-1991)
Mr. Kamburer, Mr. Huda
CIDA/AVT-CUC PP (Baht 200,000)

Agricultural Production Promotion and Farming System Analysis in Loei
Dr. Nol: Self-help Land Settlement, Northeastern Thailand
Prof. Weber, Mr. Maskey, Mr. Chirag, Mr. Chuchudim
CTZ (US$ 40,000)

Evaluation of Veterinary Services in Northeast Thailand
Prof. Weber, Mr. Maskey, Mr. Chirag, Mr. Chuchudim
Mr. Ayub, CTZ (US$ 30,000)

Solid Waste Management and Recycling in Bangkok
Dr. Yap, Mrs. Sanorn, Dr. Visanath
UNCHS (Urban) (US$ 10,000)

INTERDISCIPLINARY NATURAL RESOURCES DEVELOPMENT AND MANAGEMENT

Land-Use Study of Lake Songkhla Basin with GIS and SAR Data
Dr. Aschhero, ESA (Baht 50,000)

IRRIGATION ENGINEERING AND MANAGEMENT

Farm Irrigation System Design Constraints and Improvement in Major Irrigation Projects
Prof. Murty, CIDA (Baht 75,000)

Simulation Study of Bangkok Aquifer System
Prof. cupia, Dr. Onta
Dept. of Mineral Resources, RTG (Baht 209,884)

INDUSTRIAL ENGINEERING AND MANAGEMENT

Speech Recognition Using Fractals
Mr. Bohez, AIT Research Initiation Grant (Baht 60,000)

Production Planning and Inventory Control Modeling
Prof. Rajwattana; JICA (Baht 110,000)

Reliability Analysis of Flexible Manufacturing Systems
Dr. Nagarur
AIT Research Initiation Grant (Baht 50,000)

Managerial Policies and Techniques for Public Bus Transit Systems in Asia
Prof. Oxenhousien
RCIA (Baht 4,022,200)
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<tr>
<th>DATE</th>
<th>ACADEMIC UNIT AT AIT</th>
<th>TOPIC OF TRAINING, SEMINAR, WORKSHOP OR STUDY TOUR/VISIT</th>
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<tr>
<td>28 - 30 Jan</td>
<td>AFE</td>
<td>Soil and Water Engineering for Paddy Field Management</td>
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<td>IREM, CIDA/AIT-CUC PP, JSDIRE, GTZ, IRRI, IMI</td>
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<td>4 - 29 May</td>
<td>AFE</td>
<td>Integrated Aquaculture in Asia</td>
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<td>NORAD, Mekong Committee, DANIDA, UNICEF, FAO, AADCP, ICLARM, IDRC</td>
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<td>15 June - 10 July</td>
<td>AFE</td>
<td>The Nile Tilapia: Techniques for Mass Fry Production and Grow Out</td>
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<td>AADCP, British Embassy, FAO, NORAD, MEAVSB, IDRC, WORLDCONCERN</td>
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<td>7 Sept - 30 Oct</td>
<td>AFE</td>
<td>Regional Aquaculture US Peace Corps</td>
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<td>2 - 6 Nov</td>
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<td>Asian Farming Systems IDRC, Ford Foundation</td>
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<td>AAAE, CIDA/AIT-CUC PP, IRRI, CSAE, CSAM, CIGR, ASAE</td>
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<td>12 - 15 Oct</td>
<td>CS</td>
<td>Forecasting and Graphical Report of Water Quality Data</td>
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<td>in the Lower Mekong Mekong Secretariat</td>
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<td>30 Nov - 11 Dec</td>
<td>CS</td>
<td>6th Asian School of Computer Science CEC, French Gouv., Unesco</td>
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<td>14 - 16 Dec</td>
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<td>VLSI Workshop CEC, French Gouv., Unesco</td>
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<td>8 Jan</td>
<td>EE</td>
<td>Alcaligenes Eutrophus and its Plasmide Governing for Heavy Metal</td>
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<td>Resistance or Xenobiotic Degradation: From Gene Sequence to Bioreactors</td>
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<td>7 - 8 Feb</td>
<td>EE</td>
<td>Ecological Aspects of Methanogens and Sulfate Reducers</td>
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<td>3 Sept</td>
<td>EE</td>
<td>Conventional and Advanced Technology for Wastewater Treatment</td>
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<td>2 - 6 Nov</td>
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<td>CIDA/AIT-CUC PP, Industrial Estate Authority (Thailand), CNRS/AFME-France</td>
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<td>20 - 25 Jan</td>
<td>ET</td>
<td>Promotion of Waste Recycling and Reuse HABITAT</td>
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<td>3 - 14 Feb</td>
<td>ET</td>
<td>Second Princess Chulabhorn Science Congress: Environment, Science and Technology - the Challenges of the 21st Century</td>
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<td>9 - 15 Feb</td>
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<td>Chulabhorn Research Institute/AIT</td>
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<td>17 - 21 Feb</td>
<td>ET</td>
<td>Sectoral Energy Demand Studies in Lao PDR, Vientiane</td>
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<td>3 - 7 Mar</td>
<td>ET</td>
<td>REDP National Team, ESCAP/Govt. of France (MOFA)</td>
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<td>23 - 27 Mar</td>
<td>ET</td>
<td>Solar Refrigerator Repair and Maintenance WHO</td>
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<td>30 Apr</td>
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<td>Sectoral Energy Demand Studies in Myanmar</td>
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<td>18 - 26 Aug</td>
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<td>Sectoral Energy Demand Studies in Philippines</td>
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<td>7 - 11 Sept</td>
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<td>Sectoral Energy Demand Studies in Asia</td>
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<td>NRD/ESCAP, Govt. of France (MOFA), REDP-P1 Central Consultant</td>
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<td>4 - 8 May</td>
<td>GTE</td>
<td>Energy and Environment: Developing Countries Perspectives</td>
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<td>6 - 10 July</td>
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<td>GTE</td>
<td>Energy and the Environment CIDA/AIT-CUC PP</td>
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<td>5 Oct</td>
<td>GTE</td>
<td>Rational Use of Energy in Industry USAID, ADEME/KONEEA</td>
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<td>31 Oct - 1 Nov</td>
<td>GTE</td>
<td>Energy Auditing of Biomass Equipment EC</td>
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<td>Traffic Engineering and Its Computer Application CIDA, ERTAT</td>
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<td>Rock Slope Engineering Royal Irrigation Department (RTG)</td>
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<td>Retaining Structures - Displacement and Design Arup Geotechnics (London)</td>
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<td>Improvement of Soft Clay by Vertical Drain SEAGS, Engineering Institute of Thailand</td>
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<td>Conservation of Natural Resources and the Environment of Thailand EGAT, UNICEF, UNEP, CIDA, World Bank, Asia Foundation, Siam Cement, PACT</td>
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Traffic Engineering and Its Computer Application
Airport Authority of Thailand, Petroleum Authority of Thailand

Computer-Aided Designs in Geotechnical Engineering SEAGS
Prediction Versus Performance in Geotechnical Engineering SEAGS
Applied Ground Improvement Techniques SEAGS

Population Migration and Human Settlements Planning ILO
Data Management for Planning RHUDDO, USAID (Thailand)

Mass Urban Mapping for Indian Cities RHUDDO, USAID (Thailand)

Environment and Sustainable Development
Sri Lankan University - NGO Action Research Network

Thailand Urban Development Chulalongkorn University

Role of the City in Environmental Management USAID

Solid Waste Recycling and Reuse in Bangkok UNCHIS (Habitat), ACRO-VISION Holland

Issues in Rural Development, Group 1 (Phnom Penh)
Cambodian Research and Development Institute

Managing the Mega-urban Regions of ASEAN Countries: Policy Challenges and Responses CIDA/AIT-CUC PP, Canada-ASEAN Center (Singapore)

Issues in Rural Development, Group II (Phnom Penh)
Cambodian Research and Development Institute

Taguchi Methods in Quality Control Thammasat University

Manufacturing Resources Planning (MRP2) CIDA/AIT-CUC PP

Plant Machinery and Equipment Maintenance, Replacement and Reliability CEC

Small Business Management CEC

CNC Training

Project Management CEC

Comprehensive Training Program on CAM UNIDO

GIS Training for BMTA System Analysts

Public Bus Project (Bangkok Mass Transit Authority)

Manufacturing Resources Planning (MRP II) Application

Training of Trainers on Small Business Management CEC

Profitability of Clean Technologies in Leather Tanning Industry CDG

CNC Training (Milling)

CNC Training (Turning)

Ferrocement Technology for Construction Industry LRDC

Applied Remote Sensing US-ASEAN

Environmental Development Planning

CIDA, Sarawak Agricultural Development Project

GIS Mekong Secretariat

Natural Resources Information Management CIDA, Sarawak Agricultural Development Project, Winrock, British Technical Cooperation

Radarsat - ITC Educational Program仁arassat International

ERS-1 & SPOT: A Complementary Tool for Natural Resources Management ESA, SPOT Asia, CNES

Natural Resources Management and Conservation in a Watershed Area CDG, British Technology Cooperation, Winrock International

GIS Mekong Secretariat

Chilika Lake Project CIDA, India-Canada Cooperation Office

GIS Vietnam-Sweden Program

GIS

Natural Resources Development and Environmental Considerations
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<th>Organizer/Program</th>
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<tr>
<td>27 - 31 Jan</td>
<td>Language Workshop AIT Aquaculture Outreach Program</td>
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<tr>
<td>6 - 12 June</td>
<td>Language Program Evaluation Workshop</td>
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<td>June</td>
<td>AIT Aquaculture Outreach Program</td>
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<td>July</td>
<td>Speaking Skills (Regional Community Forestry Training Center) Kagetsart University</td>
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<td>Thesis/Dissertation Writing HSD,CIDA</td>
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<td>25 Mar</td>
<td>Korean Experience in Science and Technology EC</td>
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<td>15 - 17 June</td>
<td>Economic and Financial Analysis of Biomass Energy Projects EC</td>
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<tr>
<td>16 - 20 Nov</td>
<td>Management of Technology in Asia MOTIC</td>
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<tr>
<td>6 - 10 Dec</td>
<td>Multi-Cultural Management: The Asian and European Perspectives MOTIC</td>
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<tr>
<td>15 Jan</td>
<td>Interactive Behavior of Local and Overall Buckling of Thin-walled Structures</td>
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<td>24 Jan</td>
<td>Kuwait and Kuala Lumpur Telecommunications Tower Projects</td>
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<td>24 Feb</td>
<td>Introduction to Fracture Mechanics and Its Engineering Applications</td>
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<td>26 - 28 Feb</td>
<td>Fatigue and Fracture Control Design of Bridge Structures, and Maintenance Technology</td>
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<td>9 Mar</td>
<td>Vibration Control of Bridges and Buildings</td>
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<td>25 Mar</td>
<td>Active Vibration Control of Structures: Theory and Experiment</td>
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<td>26 June</td>
<td>Exact Stiffness Method for Dynamics of Layered Anisotropic Materials</td>
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<td>29 June</td>
<td>Multi-story Buildings: Efficient Computer Implementation</td>
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<td>10 &amp; 24 July</td>
<td>High Performance Concrete</td>
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<td>20 July</td>
<td>Qualitative Computations: Key to More Efficient Structural Analysis</td>
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<td>11 Aug</td>
<td>Productivity Improvement and Worker Motivation</td>
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<td>1 Sept</td>
<td>Construction Management Association of America</td>
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<tr>
<td>6 Oct</td>
<td>Cable-Stayed Bridges Design Concepts and Their Future</td>
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<td>27 Nov</td>
<td>Cement Hydration and Thermally Induced Stress of Massive Concrete Structures</td>
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<td>1 - 5 June</td>
<td>Construction Automation and Robotics</td>
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<td>Scientific and Industrial Research Origin of Australia</td>
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<td>15 - 26 June</td>
<td>LRDC(MOTIC)  Euro-Asia Technological Cooperation: Human Resource Development</td>
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<td>29 June - 4 July</td>
<td>LRDC(IFIC) Ferroconement End-User Training for Bengawan Solo River Development</td>
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<td>21 - 22 Aug</td>
<td>LRDC(IFIC) Ferroconement End-User Training for Mindanao, Philippines</td>
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<td>LRDC(IFIC) Ferroconement End-User for Sarawak Department of Rural Development</td>
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<td>LRDC(IFIC) Ferroconement Technology</td>
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<td>LRDC(IFIC) Trainers' Training on Ferroconement Technology</td>
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<td>LRDC(RERIC) Information Repackaging and Consolidation</td>
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<td>CEC Study Visit - Sri Lankan Officers and Farmer Representatives USAID/ADB</td>
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<td>3 - 26 Feb</td>
<td>CEC Community Water Supply and Sanitation for Developing Countries Multi</td>
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<td>Plant Machinery and Equipment (Maintenance, Replacement and Reliability) Multis</td>
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<td>Education Resource Management&lt;br&gt;Ministry of Education and Culture, Indonesia</td>
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<td>Toxic and Hazardous Waste Management&lt;br&gt;Multi</td>
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<td>Small Business Management for Cambodians&lt;br&gt;Sasakawa Peace Foundation</td>
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<td>Monitoring Health Programs and Projects SIDA</td>
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<td>20 Apr - 20 May</td>
<td>Management of Training Centers Multis</td>
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<td>Rural Water Supply and Sanitation for Chinese Officials&lt;br&gt;World Bank</td>
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<td>Sustainable Ocean Development and Management&lt;br&gt;CIDA, Canada ASEAN Center</td>
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<td>Environmental Impact Assessment and Review&lt;br&gt;CIDA, SIDA, USAID</td>
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<td>Managing Rural Development (for Pakistan)&lt;br&gt;USAID</td>
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<td>Planning and Design of Small Scale Irrigation Projects&lt;br&gt;Multi</td>
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<td>Human Resources Requirements for Natural Resources Information&lt;br&gt;French Gouv.</td>
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<td>19 - 30 Oct</td>
<td>International Marketing Management&lt;br&gt;Academy for Educational Development (Pakistan)</td>
</tr>
<tr>
<td>19 Oct - 13 Nov</td>
<td>Managing Rural Development&lt;br&gt;USAID, Sri Lankan Ministry of Policy Planning</td>
</tr>
<tr>
<td>9 - 27 Nov</td>
<td>Urban Drainage in Developing Countries&lt;br&gt;UNESCO, WHO</td>
</tr>
<tr>
<td>13 - 20 Nov</td>
<td>Community Involvement in Education&lt;br&gt;USAID</td>
</tr>
<tr>
<td>16 - 20 Nov</td>
<td>Acid Rain and Emissions in Asia&lt;br&gt;Agricultural University WAGENINGEN, The Netherlands</td>
</tr>
<tr>
<td>23 Nov - 11 Dec</td>
<td>On Farm Water Management&lt;br&gt;Japan Engineering Co., Ltd.</td>
</tr>
<tr>
<td>23 Nov - 18 Dec</td>
<td>Municipal Management for Lao Officials&lt;br&gt;UNCHS</td>
</tr>
<tr>
<td>30 Nov - 11 Dec</td>
<td>Planning with Women in Development&lt;br&gt;Agriculture Sector Team/CIDA, CIDA/JIT CUC PP, Helvetas Bhutan, NORAD, UNDP</td>
</tr>
<tr>
<td>23 Nov - 18 Dec</td>
<td>Agricultural Extension&lt;br&gt;Ethiopian Department of Agricultural Extension</td>
</tr>
</tbody>
</table>

*Multi-sponsorship applies to CEC's international/advertised courses*
## ASIAN INSTITUTE OF TECHNOLOGY
### BALANCE SHEETS
#### AS AT 30TH JUNE, 1992 AND 1991

<table>
<thead>
<tr>
<th>Note</th>
<th>Unrestricted Current Fund</th>
<th>Restricted Fund</th>
<th>Capital Fund</th>
<th>Sponsored Program Fund</th>
<th>Agency Fund</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ASSETS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash at banks</td>
<td>10,125,446</td>
<td>1,283,485</td>
<td>6,231,470</td>
<td>6,488,221</td>
<td>8,043,115</td>
<td>4,340,546</td>
</tr>
<tr>
<td>Advance duties and taxes</td>
<td>3 10,887,450</td>
<td>14,275,903</td>
<td>226,636</td>
<td>1,202,259</td>
<td>4,584,913</td>
<td>1,986,329</td>
</tr>
<tr>
<td>Accounts receivable and accrued income</td>
<td>3,391,648</td>
<td>6,772,055</td>
<td>7,873,305</td>
<td>7,198,438</td>
<td>226,636</td>
<td>1,202,259</td>
</tr>
<tr>
<td>Deposits</td>
<td>822,593</td>
<td>351,593</td>
<td>160,407</td>
<td>528,800</td>
<td>160,407</td>
<td>528,800</td>
</tr>
<tr>
<td>Inventories</td>
<td>–</td>
<td>–</td>
<td>863,413</td>
<td>938,320</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Due from other funds</td>
<td>–</td>
<td>–</td>
<td>27,502,094</td>
<td>27,502,094</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Fixed assets</td>
<td>4</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>1,319,041,201</td>
<td>1,164,610,322</td>
</tr>
<tr>
<td><strong>TOTAL ASSETS</strong></td>
<td>41,410,989</td>
<td>40,179,356</td>
<td>320,719,998</td>
<td>324,494,824</td>
<td>1,370,324,193</td>
<td>1,205,899,232</td>
</tr>
</tbody>
</table>

### LIABILITIES AND FUND BALANCES

#### LIABILITIES

<table>
<thead>
<tr>
<th>Note</th>
<th>Accounts payable and accrued expenses</th>
<th>Deposits</th>
<th>Due to other funds</th>
<th>TOTAL LIABILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,206,686</td>
<td>1,006,640</td>
<td>2,836,969</td>
<td>2,836,969</td>
</tr>
<tr>
<td></td>
<td>685,800</td>
<td>658,000</td>
<td>956,982</td>
<td>956,982</td>
</tr>
<tr>
<td></td>
<td>583</td>
<td>–</td>
<td>27,502,094</td>
<td>27,502,094</td>
</tr>
<tr>
<td><strong>TOTAL LIABILITIES</strong></td>
<td>2,896,274</td>
<td>1,664,640</td>
<td>31,296,045</td>
<td>30,767,313</td>
</tr>
</tbody>
</table>

#### FUND BALANCES

| Note | 6 38,514,715 | 38,514,715 | 289,423,933 | 293,282,311 | 1,136,936,441 | 1,220,712,937 | 80,590,145 | 76,295,025 | 40,203,037 | 42,538,231 | 1,816,758,291 | 1,655,977,420 |

### TOTAL LIABILITIES AND FUND BALANCES

| Note | 41,410,989 | 40,179,356 | 320,719,998 | 324,494,824 | 1,370,324,193 | 1,205,899,232 | 81,760,962 | 82,967,904 | 40,944,414 | 43,081,356 | 1,455,160,556 | 1,696,197,572 |

*The accompanying notes are an integral part of the financial statements.*

**PRESIDENT**
## ASIAN INSTITUTE OF TECHNOLOGY

**STATEMENTS OF REVENUES AND EXPENDITURES – UNRESTRICTED CURRENT FUND AND RESTRICTED FUND – GENERAL
FOR THE YEARS ENDED 30TH JUNE, 1992 AND 1991**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BAHT</td>
<td>BAHT</td>
<td>BAHT</td>
<td>BAHT</td>
<td>BAHT</td>
<td>BAHT</td>
</tr>
<tr>
<td><strong>REVENUES:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition and fees:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic divisions</td>
<td>190,621,899</td>
<td>169,141,084</td>
<td>0</td>
<td>0</td>
<td>190,621,899</td>
<td>169,141,084</td>
</tr>
<tr>
<td>Computer center</td>
<td>6,164,281</td>
<td>6,733,249</td>
<td>0</td>
<td>0</td>
<td>6,164,281</td>
<td>6,733,249</td>
</tr>
<tr>
<td></td>
<td>196,786,171</td>
<td>175,874,333</td>
<td></td>
<td></td>
<td>196,786,171</td>
<td>175,874,333</td>
</tr>
<tr>
<td>Gifts and contributions:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>7,826,591</td>
<td>8,659,619</td>
<td>66,271,229</td>
<td>25,110,618</td>
<td>73,097,819</td>
<td>30,720,837</td>
</tr>
<tr>
<td>In kind (Note 5)</td>
<td>7,826,591</td>
<td>8,659,619</td>
<td>66,271,229</td>
<td>25,110,618</td>
<td>73,097,819</td>
<td>30,720,837</td>
</tr>
<tr>
<td></td>
<td>7,826,591</td>
<td>8,659,619</td>
<td>66,271,229</td>
<td>25,110,618</td>
<td>73,097,819</td>
<td>30,720,837</td>
</tr>
<tr>
<td>Grants and contracts</td>
<td>5,538,564</td>
<td></td>
<td></td>
<td></td>
<td>5,538,564</td>
<td></td>
</tr>
<tr>
<td>Sales and services:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational activities</td>
<td>269,349</td>
<td>937,239</td>
<td>62,413,313</td>
<td>53,674,032</td>
<td>69,032,652</td>
<td>54,611,271</td>
</tr>
<tr>
<td>Others</td>
<td>269,349</td>
<td>937,239</td>
<td>62,413,313</td>
<td>53,674,032</td>
<td>69,032,652</td>
<td>54,611,271</td>
</tr>
<tr>
<td></td>
<td>937,239</td>
<td></td>
<td>62,413,313</td>
<td>53,674,032</td>
<td>69,032,652</td>
<td>54,611,271</td>
</tr>
<tr>
<td>Income from investments</td>
<td>19,473,017</td>
<td>25,242,475</td>
<td></td>
<td></td>
<td>19,473,017</td>
<td>25,242,475</td>
</tr>
<tr>
<td>Recovery of indirect costs</td>
<td>76,137,443</td>
<td>55,715,824</td>
<td></td>
<td></td>
<td>76,137,443</td>
<td>55,715,824</td>
</tr>
<tr>
<td>AIT sponsored programs</td>
<td>10,612,151</td>
<td>6,141,609</td>
<td></td>
<td></td>
<td>10,612,151</td>
<td>6,141,609</td>
</tr>
<tr>
<td>Physical plant support</td>
<td>36,120,032</td>
<td>24,160,599</td>
<td></td>
<td></td>
<td>36,120,032</td>
<td>24,160,599</td>
</tr>
<tr>
<td>Exchange stabilization</td>
<td>5,538,564</td>
<td>3,872,637</td>
<td>5,538,564</td>
<td>3,872,637</td>
<td>5,538,564</td>
<td>3,872,637</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>2,669</td>
<td>341,274</td>
<td>0</td>
<td>0</td>
<td>2,669</td>
<td>341,274</td>
</tr>
<tr>
<td></td>
<td>937,239</td>
<td></td>
<td>62,413,313</td>
<td>53,674,032</td>
<td>69,032,652</td>
<td>54,611,271</td>
</tr>
<tr>
<td><strong>TOTAL REVENUES</strong></td>
<td>243,372,481</td>
<td>223,349,105</td>
<td>327,753,928</td>
<td>260,352,080</td>
<td>571,126,742</td>
<td>480,791,185</td>
</tr>
<tr>
<td><strong>EXPENDITURES:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries and associated costs</td>
<td>140,119,751</td>
<td>123,627,856</td>
<td>6,525,881</td>
<td>6,376,565</td>
<td>146,645,632</td>
<td>130,395,417</td>
</tr>
<tr>
<td>In kind (Note 5)</td>
<td>140,119,751</td>
<td>123,627,856</td>
<td>6,525,881</td>
<td>6,376,565</td>
<td>146,645,632</td>
<td>130,395,417</td>
</tr>
<tr>
<td>Academic units operating costs</td>
<td>20,034,280</td>
<td>20,130,034</td>
<td>87,517,859</td>
<td>73,517,354</td>
<td>113,551,139</td>
<td>90,647,388</td>
</tr>
<tr>
<td>Student related costs</td>
<td>1,193,073</td>
<td>1,368,301</td>
<td>6,147,982</td>
<td>5,756,935</td>
<td>7,343,055</td>
<td>7,065,236</td>
</tr>
<tr>
<td>Administrative support costs</td>
<td>3,765,983</td>
<td>14,502,764</td>
<td>84,323</td>
<td>285,342</td>
<td>95,450,648</td>
<td>14,820,106</td>
</tr>
<tr>
<td>Capital purchases</td>
<td>9,014,794</td>
<td>10,117,301</td>
<td>1,074,730</td>
<td>1,094,373</td>
<td>10,115,528</td>
<td>11,211,674</td>
</tr>
<tr>
<td>Campus wide services</td>
<td>55,791,204</td>
<td>40,830,569</td>
<td>49,365,749</td>
<td>30,723,223</td>
<td>95,656,950</td>
<td>80,649,772</td>
</tr>
<tr>
<td>Physical plant support costs</td>
<td>6,641,281</td>
<td>1,010,836</td>
<td>6,641,281</td>
<td>1,010,836</td>
<td>6,641,281</td>
<td>1,010,836</td>
</tr>
<tr>
<td>Auxiliary services costs</td>
<td>86,310,921</td>
<td>30,459,558</td>
<td>86,310,921</td>
<td>30,459,558</td>
<td>86,310,921</td>
<td>30,459,558</td>
</tr>
<tr>
<td>Exchange stabilization</td>
<td>2,577,840</td>
<td>7,920,942</td>
<td>2,577,840</td>
<td>7,920,942</td>
<td>2,577,840</td>
<td>7,920,942</td>
</tr>
<tr>
<td>Other costs</td>
<td>14,446,318</td>
<td>6,989,698</td>
<td>14,446,318</td>
<td>6,989,698</td>
<td>14,446,318</td>
<td>6,989,698</td>
</tr>
<tr>
<td><strong>TOTAL EXPENDITURES</strong></td>
<td>233,920,489</td>
<td>213,607,025</td>
<td>337,901,781</td>
<td>247,854,122</td>
<td>573,822,270</td>
<td>461,461,147</td>
</tr>
<tr>
<td><strong>EXCESS OF REVENUES OVER EXPENDITURES</strong> (EXCESS OVER REVENUES)</td>
<td>7,452,825</td>
<td>6,742,080</td>
<td>(10,147,853)</td>
<td>12,497,958</td>
<td>(2,695,528)</td>
<td>19,204,038</td>
</tr>
</tbody>
</table>
TO THE BOARD OF TRUSTEES
OF THE ASIAN INSTITUTE OF TECHNOLOGY

We have examined the balance sheets of Asian Institute of Technology as at 30th June, 1992 and 1991, the statements of revenues and expenditures of unrestricted current fund and restricted fund-general and the related statements of changes in fund balances for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the financial position of Asian Institute of Technology as at 30th June, 1992 and 1991, the revenues and expenditures of unrestricted current fund and restricted fund-general and changes in fund balances for the years then ended, in conformity with generally accepted accounting principles appropriate for non-profit organisation as set out in Note 1 to the financial statements, applied on a consistent basis.

Ernst & Young
Bangkok: 16th October 1992

ASIAN INSTITUTE OF TECHNOLOGY NOTES TO FINANCIAL STATEMENTS

NOTE 1 -
SUMMARY OF SIGNIFICANT
ACCOUNTING POLICIES

1.1 Fund accounting
In order to ensure observance of limitations and restrictions placed on the use of the resources available to the Institute, the books of account of the Institute are maintained in accordance with the principles of “fund accounting”. This is the procedure by which resources for various purposes are classified for accounting and reporting purposes into funds which are in accordance with activities or objects specified. Within each fund group, fund balances which are restricted by outside sources are so indicated and are distinguished from unrestricted fund allocated to specific purposes by action of the governing board. As for unrestricted fund, the governing board retains full control to use in achieving any of its institutional purposes.

Investments income are recognised as income in the unrestricted current fund except for endowments, general reserve and capital funds which are accounted for in the fund to which it is restricted.

Other unrestricted revenues are recognised as income in the unrestricted current fund.

Restricted contributions, grants, appropriations and other restricted resources are accounted for in the appropriate restricted funds.

1.2 Accrual basis
The financial statements have been prepared on an accrual basis except for depreciation of fixed assets and contributions.

Depreciation of fixed assets is not recorded in accordance with the fund accounting concept.

Contributions are recognised on a cash basis due to the uncertainty in receiving contributions which are at the discretion of the donors.

The statement of revenues and expenditures of unrestricted current fund and restricted general fund is a statement of financial activities of current fund related to the current reporting period. It does not purport to present the results of operations for the period as would an earnings statement.

1.3 Contributions in kind
Contributions in kind are reflected in the financial statements on a fair value basis at the time of receipt.

1.4 Inventories
Inventories are valued at the lower of cost (first-in, first-out basis) and net realisable value.

1.5 Fixed assets
Fixed assets are stated at cost at the time of acquisition or fair value at the time of donation in the case of contributions in kind.

1.6 Foreign currencies
Exchange rates adopted:
Foreign currency transactions during the year at the rates ruling on the transaction dates.
Assets and liabilities in foreign currency outstanding on the balance sheet date at the rates ruling on the balance sheet dates.
Exchange gains and losses are recognised as revenue and expenditure and taken up in the statement of changes in fund balances.

NOTE 2 - INVESTMENTS

<table>
<thead>
<tr>
<th>1992</th>
<th>1991</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAHT</td>
<td>BAHT</td>
</tr>
<tr>
<td>Time deposits with banks</td>
<td>187,909,433</td>
</tr>
<tr>
<td>Deposits with finance companies</td>
<td>183,661,365</td>
</tr>
<tr>
<td>Total</td>
<td>371,600,798</td>
</tr>
</tbody>
</table>
The investments of each fund as at 30th June, 1992 and 1991 are as follows:

<table>
<thead>
<tr>
<th>Fund Type</th>
<th>1992</th>
<th>1991</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unrestricted current fund</td>
<td>16,233,853</td>
<td>14,498,820</td>
</tr>
<tr>
<td>Restricted fund</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>71,518,415</td>
<td>82,354,762</td>
</tr>
<tr>
<td>Endowment</td>
<td>59,562,583</td>
<td>57,346,729</td>
</tr>
<tr>
<td>General reserve</td>
<td>147,008,305</td>
<td>141,697,954</td>
</tr>
<tr>
<td></td>
<td>278,089,309</td>
<td>281,399,445</td>
</tr>
<tr>
<td>Capital fund</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid assets</td>
<td>35,096,883</td>
<td>24,608,855</td>
</tr>
<tr>
<td>Repairs and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance reserve</td>
<td>7,916,357</td>
<td>10,972,250</td>
</tr>
<tr>
<td></td>
<td>43,013,240</td>
<td>35,581,105</td>
</tr>
<tr>
<td>Sponsored program fund</td>
<td>28,267,984</td>
<td>58,320,132</td>
</tr>
<tr>
<td>Agency fund</td>
<td>5,996,412</td>
<td>24,753,621</td>
</tr>
<tr>
<td></td>
<td>371,600,708</td>
<td>414,553,123</td>
</tr>
</tbody>
</table>

Time deposits with banks amounting to Baht 12.8 million (1991: Baht 13.9 million) of the restricted general reserve fund has been pledged with a bank as collateral against outstanding letter of guarantee issued by the bank (see Note 8).

NOTE 3 - ADVANCE DUTIES AND TAXES

This represents advance duties and taxes payments to the Government of Thailand which will be subsequently refunded to the Institute in accordance with the letter of the Office of the Secretary-General to the Cabinet dated 16th July, 1985. The refund of the advance is for non-Thai faculty and staff and is subject to the annual government budget of the Government of Thailand.

The details of advance duties and taxes as at 30th June, 1992 and 1991 are as follows:

<table>
<thead>
<tr>
<th></th>
<th>1992</th>
<th>1991</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees personal income tax</td>
<td>10,000,000</td>
<td>12,970,999</td>
</tr>
<tr>
<td>Import duty and business tax</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automobile</td>
<td>357,990</td>
<td>455,612</td>
</tr>
<tr>
<td>Wine and spirits</td>
<td>471,856</td>
<td>636,154</td>
</tr>
<tr>
<td>Other</td>
<td>7,604</td>
<td>11,138</td>
</tr>
<tr>
<td></td>
<td>10,837,450</td>
<td>14,275,903</td>
</tr>
</tbody>
</table>

NOTE 4 - FIXED ASSETS

<table>
<thead>
<tr>
<th></th>
<th>1992</th>
<th>1991</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus development</td>
<td>22,031,502</td>
<td>21,147,459</td>
</tr>
<tr>
<td>Buildings</td>
<td>491,864,066</td>
<td>485,009,084</td>
</tr>
<tr>
<td>Furniture and equipment</td>
<td>587,199,727</td>
<td>525,834,817</td>
</tr>
<tr>
<td>Library acquisitions</td>
<td>78,175,811</td>
<td>71,295,841</td>
</tr>
<tr>
<td>Construction in progress</td>
<td>139,770,065</td>
<td>61,322,221</td>
</tr>
<tr>
<td></td>
<td>1,319,041,201</td>
<td>1,164,610,322</td>
</tr>
</tbody>
</table>

Depreciation for the year amounting to Baht 61,595,143 (1991: Baht 63,586,805) has not been recorded in accordance with the fund accounting concept.

NOTE 5 - CONTRIBUTIONS IN KIND - SERVICES

This represents services donated to the Institute in the form of seconded faculty or staff of which the value is estimated on a basis in accordance with the approved Institute professional salary scale. The amounts are recognised as revenues and expenditures in the restricted general fund.

NOTE 6 - FUND BALANCES

<table>
<thead>
<tr>
<th></th>
<th>1992</th>
<th>1991</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricted fund</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>52,947,813</td>
<td>63,095,665</td>
</tr>
<tr>
<td>Endowment</td>
<td>59,861,252</td>
<td>57,775,180</td>
</tr>
<tr>
<td>General reserve</td>
<td>176,614,488</td>
<td>172,411,666</td>
</tr>
<tr>
<td></td>
<td>289,423,953</td>
<td>293,282,511</td>
</tr>
<tr>
<td>Capital fund</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed assets</td>
<td>1,319,041,201</td>
<td>1,164,610,323</td>
</tr>
<tr>
<td>Liquid assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Unallocated</td>
<td>10,392,298</td>
<td>7,490,784</td>
</tr>
<tr>
<td>Liquid assets</td>
<td>30,586,585</td>
<td>21,639,581</td>
</tr>
<tr>
<td>- Allocated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repairs and</td>
<td>7,916,357</td>
<td>10,972,249</td>
</tr>
<tr>
<td>Maintenance reserve</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1,387,936,441</td>
<td>1,204,712,937</td>
</tr>
</tbody>
</table>

NOTE 7 - CAPITAL COMMITMENTS

As at 30th June, 1992, the Institute had capital commitments in respect of building construction amounting to approximately Baht 9.0 million (1991: Baht 40.3 million).

NOTE 8 - BANK GUARANTEES

As at 30th June, 1992, there were outstanding bank guarantees of approximately Baht 1.2 million (1991: Baht 10.1 million) issued by the bank on behalf of the Institute in respect of certain performance bonds as required in the normal course of business of the Institute.
### ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAAE</td>
<td>Asian Association for Agricultural Engineering</td>
</tr>
<tr>
<td>AADCP</td>
<td>ASEAN EECE Aquaculture Development and Coordination Programme</td>
</tr>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>ADEME</td>
<td>Agence de l'Environnement et de la Maitrise de l'Energie</td>
</tr>
<tr>
<td>AEEETRC</td>
<td>ASEAN-EC Energy Management Training and Research Center</td>
</tr>
<tr>
<td>AFME</td>
<td>French Agency for Energy Management</td>
</tr>
<tr>
<td>ASAE</td>
<td>American Society of Agricultural Engineers</td>
</tr>
<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
</tr>
<tr>
<td>CDG</td>
<td>Carl Duisberg Gesellschaft</td>
</tr>
<tr>
<td>CIDAIIT CUC PP</td>
<td>Canadian International Development Agency/AIT Canadian University Consortium Partnership Project</td>
</tr>
<tr>
<td>CIGR</td>
<td>International Commission of Agricultural Engineering</td>
</tr>
<tr>
<td>CNES</td>
<td>Centre National D’Etudes Spatiales</td>
</tr>
<tr>
<td>CNRS</td>
<td>Centre National pour la Recherche Scientifique</td>
</tr>
<tr>
<td>CSAE</td>
<td>Chinese Society of Agricultural Engineers</td>
</tr>
<tr>
<td>CSAM</td>
<td>Chinese Society of Agricultural Machinery</td>
</tr>
<tr>
<td>DAAD</td>
<td>German Academic Exchange Service</td>
</tr>
<tr>
<td>DANIDA</td>
<td>Danish International Development Agency</td>
</tr>
<tr>
<td>DTEC</td>
<td>Department of Technical and Economic Cooperation, Royal Thai Government</td>
</tr>
<tr>
<td>EC</td>
<td>European Community</td>
</tr>
<tr>
<td>EGAT</td>
<td>Electricity Generating Authority of Thailand</td>
</tr>
<tr>
<td>EIT</td>
<td>Engineering Institute of Thailand</td>
</tr>
<tr>
<td>ERTA</td>
<td>Expressway and Rapid Transit Authority of Thailand</td>
</tr>
<tr>
<td>ESCAP</td>
<td>Economic and Social Commission for Asia and the Pacific, UN</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization, UN</td>
</tr>
<tr>
<td>FINNIDA</td>
<td>Finnish International Development Agency</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographic Information Systems</td>
</tr>
<tr>
<td>GRID</td>
<td>Global Resources Information Database</td>
</tr>
<tr>
<td>GTZ</td>
<td>German Agency for Technical Cooperation</td>
</tr>
<tr>
<td>IAEA</td>
<td>International Atomic Energy Agency</td>
</tr>
<tr>
<td>ICIMOD</td>
<td>International Center for Integrated Mountain Development</td>
</tr>
<tr>
<td>ICLARM</td>
<td>International Center for Living Aquatic Resources Management</td>
</tr>
<tr>
<td>IDRC</td>
<td>International Development and Research Center, Canada</td>
</tr>
<tr>
<td>IIT</td>
<td>Indian Institute of Technology</td>
</tr>
<tr>
<td>IIMI</td>
<td>International Irrigation Management Institute</td>
</tr>
<tr>
<td>ILO</td>
<td>International Labour Organization</td>
</tr>
<tr>
<td>INRIA</td>
<td>National Institute of Research in Computer Science and Automation, France</td>
</tr>
<tr>
<td>ITU</td>
<td>International Telecommunications Union</td>
</tr>
<tr>
<td>IRRI</td>
<td>International Rice Research Institute</td>
</tr>
<tr>
<td>IUCN</td>
<td>International Union for the Conservation of Nature</td>
</tr>
<tr>
<td>JICA</td>
<td>Japan International Cooperation Agency</td>
</tr>
<tr>
<td>JSDIRE</td>
<td>Japan Society of Irrigation, Drainage and Reclamation Engineering</td>
</tr>
<tr>
<td>KEIDANREN</td>
<td>Federation of Economic Organizations, Japan</td>
</tr>
<tr>
<td>KU</td>
<td>Kasetsart University, Thailand</td>
</tr>
<tr>
<td>KMIT</td>
<td>King Mongkut’s Institute of Technology</td>
</tr>
<tr>
<td>LED-SAAM</td>
<td>Lyonnaise Des Eaux Dunex-Macau Waterworks</td>
</tr>
<tr>
<td>MOFA</td>
<td>Ministry of Foreign Affairs, France</td>
</tr>
<tr>
<td>MOSTE</td>
<td>Ministry of Science, Technology, and Energy, Royal Thai Government</td>
</tr>
<tr>
<td>MSU</td>
<td>Mindanao State University</td>
</tr>
<tr>
<td>NIHA</td>
<td>National Housing Authority, Thailand</td>
</tr>
<tr>
<td>NORAD</td>
<td>Norwegian Agency for International Development</td>
</tr>
<tr>
<td>ODA</td>
<td>Overseas Development Administration, UK</td>
</tr>
<tr>
<td>OFDA</td>
<td>Office of Foreign Disaster Assistance</td>
</tr>
<tr>
<td>PACT</td>
<td>Private Agencies Collaborating Together</td>
</tr>
<tr>
<td>PICS</td>
<td>Programme Interdisciplinaire de Coopérations</td>
</tr>
<tr>
<td>REDP</td>
<td>Regional Energy Development Program</td>
</tr>
<tr>
<td>RELC</td>
<td>Regional Language Center</td>
</tr>
<tr>
<td>RTG</td>
<td>Royal Thai Government</td>
</tr>
<tr>
<td>RUCA</td>
<td>State University of Antwerp</td>
</tr>
<tr>
<td>RHUDD</td>
<td>Regional Housing and Urban Development Office, USAID</td>
</tr>
<tr>
<td>SEAGS</td>
<td>Southeast Asian Geotechnical Society</td>
</tr>
<tr>
<td>SID</td>
<td>Swedish International Development Authority</td>
</tr>
<tr>
<td>SPOT</td>
<td>System Pour l’ Observation de la Terre</td>
</tr>
<tr>
<td>UA</td>
<td>Uniox Associe</td>
</tr>
<tr>
<td>UNCHS</td>
<td>UN Commission for Human Settlements</td>
</tr>
<tr>
<td>UNCTAD</td>
<td>UN Conference on Trade and Development</td>
</tr>
<tr>
<td>UNIDO</td>
<td>UN Industrial Development Organization</td>
</tr>
<tr>
<td>UNDP</td>
<td>UN Development Program</td>
</tr>
<tr>
<td>UNR</td>
<td>UN Disaster Relief Organization</td>
</tr>
<tr>
<td>UNESCO</td>
<td>UN Environment Program</td>
</tr>
<tr>
<td>UNESPO</td>
<td>UN Educational, Scientific and Cultural Organization</td>
</tr>
<tr>
<td>UNFPA</td>
<td>UN Fund for Population Activities</td>
</tr>
<tr>
<td>UNHCR</td>
<td>UN High Commissioner for Refugees</td>
</tr>
<tr>
<td>UNICEF</td>
<td>UN Children’s Fund</td>
</tr>
<tr>
<td>UNIF</td>
<td>UN Institute for Training and Research</td>
</tr>
<tr>
<td>UNR</td>
<td>United Nations University</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>WB</td>
<td>World Bank</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>WMO</td>
<td>World Meteorological Organization</td>
</tr>
</tbody>
</table>

### OFFICES IN THE INSTITUTE

<table>
<thead>
<tr>
<th>Office</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFE</td>
<td>Agricultural and Food Engineering</td>
</tr>
<tr>
<td>CS</td>
<td>Computer Science</td>
</tr>
<tr>
<td>EE</td>
<td>Environmental Engineering</td>
</tr>
<tr>
<td>ET</td>
<td>Energy Technology</td>
</tr>
<tr>
<td>GTE</td>
<td>Geotechnical and Transportation Engineering</td>
</tr>
<tr>
<td>HSD</td>
<td>Human Settlements Development</td>
</tr>
<tr>
<td>IEM</td>
<td>Industrial Engineering and Management</td>
</tr>
<tr>
<td>SEC</td>
<td>Structural Engineering and Construction</td>
</tr>
<tr>
<td>WRE</td>
<td>Water Resources Engineering</td>
</tr>
<tr>
<td>SMO</td>
<td>School of Management</td>
</tr>
<tr>
<td>TC</td>
<td>Telecommunications</td>
</tr>
<tr>
<td>IREM</td>
<td>Irrigation Engineering and Management</td>
</tr>
<tr>
<td>INRD</td>
<td>Interdisciplinary Natural Resources Development and Management Program</td>
</tr>
<tr>
<td>ADPC</td>
<td>Asian Disaster Preparedness Center</td>
</tr>
<tr>
<td>CEC</td>
<td>Continuing Education Center</td>
</tr>
<tr>
<td>RCC</td>
<td>Regional Computer Center</td>
</tr>
<tr>
<td>LRDC</td>
<td>Library and Regional Documentation Center</td>
</tr>
<tr>
<td>LC</td>
<td>Language Center</td>
</tr>
<tr>
<td>RRDC</td>
<td>Regional Research and Development Center</td>
</tr>
<tr>
<td>RERIC</td>
<td>Regional Energy Resources Information Center</td>
</tr>
<tr>
<td>ENSIC</td>
<td>Environmental Sanitation Information Center</td>
</tr>
<tr>
<td>IFIC</td>
<td>International Ferrocement Information Center</td>
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<tr>
<td>AGE</td>
<td>Asian Geotechnical Engineering Information Center</td>
</tr>
<tr>
<td>MOTIC</td>
<td>Management of Technology Information Center</td>
</tr>
<tr>
<td>PCAD</td>
<td>Program in Computer Applications Development</td>
</tr>
</tbody>
</table>
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