

Asian Institute of Technology



Pride and Spirit



COVER : Since assuming the Presidency on 1 August 1996, Prof. Roger G. H. Downer has focused his efforts on enhancing AIT's capabilities as a college, a corporation, and a community. In his words:

AIT is an intellectually vigorous college of enthusiastic and dedicated scholars; a corporation which is efficient, well-managed, responsible and accountable; and a community composed of caring and supportive members.

This embodies the pride and spirit of AIT.

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The Year at AIT

A Royal Inauguration

Her Royal Highness Princess Maha Chakri Sirindhorn graciously presided over the Royal inauguration of the Chalerm Prakiat Building on 26 November. A gift from AIT Trustee and Thai industrialist, Dr. Somsak Leeswadtrakul, the Chalerm Prakiat Building is dedicated to Their Majesties the King and Queen, in support of the Royal Family's commitment to work for the betterment not only of Thailand but of all countries in the region. The Royal Thai Government supported the construction of the academic wing.

AIT acknowledges the support of other major donors: the Royal Belgian Government for providing a water jet cutter and other CNC machines, the Austrian Government for its donation of CNC machines, Siemens for equipping the manufacturing systems control and automation laboratory, and other industrial partners for providing software support. The Chalerm Prakiat Building houses the Industrial Systems Engineering Program in the School of Advanced Technologies and also provides a base for the Skills Center.



HRH Princess Maha Chakri Sirindhorn signing a commemorative guest book at the reception hall of the new Chalerm Prakiat Building, while AIT President Roger G. H. Downer looks on.



Her Royal Highness presenting a memento to Dr. Somsak Leeswadtrakul.



Prof. Downer and Dr. Somsak are seen with Prof. M. T. Tabucanon, SAT Dean; Prof. Pitsidhi Karasudhi, AIT Vice President for Development; Mrs. Jean Downer; and Mr. Paron Israsena na Ayudhya, Advisory Chairman, SSP Group, from left.

NEW VPAA



Prof. Karl E. Weber was appointed Vice President for Academic Affairs effective 1 July 1996, succeeding Prof. Ricardo P. Pama. Prof. Weber, founding Dean of the School of Environment, Resources and Development, joined AIT in 1978 and served as Chairperson of the former Division of Human Settlements Development from 1982 to 1986. He has played key roles in the implementation of CIDA support programs at AIT. Prof. Weber obtained his M.A. in Ethnology and Dr.Phil. in Sociology from Ruperto Carola University, Heidelberg.

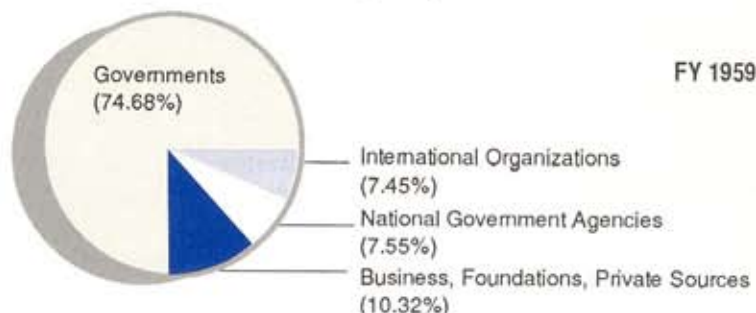
RESOURCE GENERATION

Total Contributions Received in FY1995-96: Baht 785,827,000

Total Contributions by Sector
FY 1995-96 and FY 1959 - FY1996
(% of total contributions received)



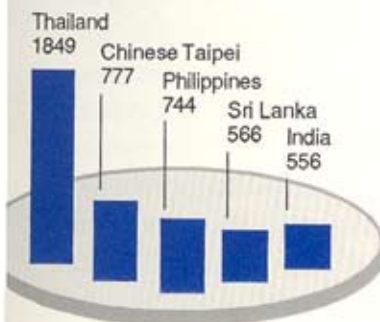
FY 1995-96



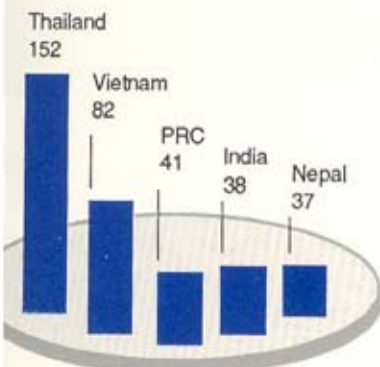
FY 1959-FY 1996

■ ALUMNI

Five Largest Groups of Alumni (1961-1996)



Five Largest Groups of Graduates in 1996



AITAA

Distinguished Alumni Award

The AIT Alumni Association (AITAA) honored Dr. Ricardo P. Pama (SEC '64) and Dr. S. M. Qureshi (SEC '65) with its first-ever Distinguished Alumni Award. The Award recognizes outstanding professional and technical achievement, distinguished service to the profession or the community at large, and significant contributions to enhancing the reputation of AIT.

The Award was presented at the 25th Governing Board Meeting of AITAA, held in Islamabad, Pakistan, in April.

■ MILESTONES



Prof. Dr. Her Royal Highness Princess Chulabhorn, President of Chulabhorn Research Institute, and Dr. Alastair M. North, former AIT President, signed a memorandum of understanding on 12 June, paving the way for the establishment of the joint CRI/AIT Doctoral and Master's programs in environmental toxicology, technology and management. International experts from North America, Europe and Asia will help conduct the programs.

H.E. Mr. Alberto Fujimori, President of the Republic of Peru, accompanied by H.E. Mr. Domingo Palermo, Peruvian Minister of Education, and party, met Institute officials led by M.L. Birabhongse Kasemsri, Chairperson of the AIT Board of Trustees, on 18 November at the signing of an agreement to promote collaborative teaching and research activities in science and technology. The agreement was signed by Mr. Palermo and M. L. Birabhongse (right) in the presence of President Fujimori and M.R. Kasem S. Kasemsri, Deputy Prime Minister of Thailand (center).



H.E. Mr. Toshiki Kaiju, former Prime Minister of Japan, received an Honorary Degree of Doctor of Technology from AIT President, Prof. Roger G.H. Downer, at the 78th graduation on 12 December. Mr. Kaiju served as Prime Minister of Japan from 1989 to 1991 and as Minister of Education in 1976 and 1985. He was elected to the House of Representatives in 1960 and served 13 consecutive terms.



On 1 August Prof. Downer led Institute officials in welcoming H.E. Mr. Pekka Haavisto, Finnish Minister of Environment and Development. Immediately behind them is Prof. Pisidhi Karasudhi, AIT Vice President for Development. The Finnish Minister and his party toured various research facilities at the Institute.

President's Message

A few years ago, Clark Kerr, erstwhile President of the University of California at Berkeley, pointed out that of all the governments, organizations and institutions that existed in Europe 400 years ago, less than 70 remain today in more-or-less unaltered form. They include the Roman Catholic Church, the Government of the Isle of Man and over 60 universities. Thus, from the perspective of a biologist, universities are a remarkably successful and resilient species capable of adapting to change in a sensible, controlled manner.

This has been a reassuring thought as AIT embarked upon the current academic year with a new administration and a clearly recognized need to adjust to changing economic and political climates. It is encouraging to report that, during the past seven months, AIT has confirmed the hardiness of the university species and is effecting the required transitions without any diminution in quality or in the effectiveness with which the institutional mission is accomplished.

*Sharing his vision of AIT
AIT Forum, May 1996*

"... an intellectually vigorous college of enthusiastic and dedicated scholars; a corporation which is efficient, well managed, responsible and accountable; and a community composed of caring and supportive associates who take pride in being members of AIT."

*Citing the opportunities and challenges to AIT
AIT Review, September 1996*

"The pace of technological change and the rate of economic growth occurring throughout modern Asia are unparalleled in history. AIT is situated at the hub of this maelstrom of activity with a mandate to provide technological research graduate training and outreach in support of the countries of Asia. Thus, the opportunity for AIT to play a significant role in the economic and social welfare of Asia is considerable.

College

As an institute of higher learning, AIT is part of the global college of scholars dedicated to the discovery and promulgation of knowledge. Within this vast college, AIT occupies a vitally important niche - advanced graduate training, research and outreach activities in support of sustainable technological development throughout the Asian region. Statistical data presented in this report suggest that by all generally accepted criteria for evaluation of academic performance, AIT has fulfilled splendidly its collegial responsibilities. Students and alumni have enjoyed success, faculty have gained distinction in national and international fora, and our outreach activities have had a marked and positive impact throughout the region.

"Through viable, mutually beneficial partnerships with governments, aid agencies, business corporations and educational institutions, AIT facilitates attainment of its objectives. AIT must also be alert to opportunities for revenue generation through such vehicles as technology transfer, with income derived from license and royalty fees, and competitively priced executive training courses.

Corporation

In addition to its primary collegial role, AIT also has a corporate dimension with fiduciary responsibilities to over 1000 employees, bargaining units, and the many governments, agencies, corporations and individuals who partner the Institute in its various activities. Thus, it behooves AIT to conduct its business in an efficient, responsible, cost-effective manner. The change in administration which occurred at the beginning of the academic year provided opportunity to evaluate the current administrative structure and, as a result, a process of administrative reform is underway.

It is pleasing to report also that, although the lack of a permanent on-going operating budget introduces annual uncertainties in financial planning, the required operating income has again been generated and the Institute continues to operate "in the black". Physical resources were enhanced with the opening of the Chalem Prakiat Building which houses the Industrial Systems Engineering Program and a skills center. The building was made possible through a generous donation from Dr. Somsak Leeswadtrakul, valued support from the Royal Thai Government, the provision of equipment and software support by Siemens and other major donors. A highlight of the campus year was the opening of the building in a splendid ceremony which was enriched by the gracious presence of HRH Princess Maha Chakri Sirindhorn.

"In spite of the inevitable changes that will result from our institutional responses to changing conditions, the basic spirit and ethos of AIT must prevail. AIT is a multi-cultural community of scholars and students who pursue a quest for new knowledge and understanding in a spirit of collegiality, tolerance and trust."

Community

One of the great strengths of AIT continues to be the many talented men and women who comprise the AIT community. It is important to recognize the strengths and opportunities of the multi-cultural environment of AIT and strive to develop and preserve a collegial spirit of intellectual excitement and an ethos which emphasizes continual improvement in all aspects of our operation.

Thus, as I reflect on the year of transition, I am encouraged by what has been achieved, bullish about the future and confident that AIT will survive, flourish and continue to occupy with assurance, its pivotal position in higher education and economic development in Asia.



A handwritten signature in dark ink, appearing to read "Roger G. H. Downer". The signature is fluid and cursive.

Roger G. H. Downer
President

*Plenary lecture to First ASEAN Business Summit
Jakarta, March 1997*

"The new economy with its emphasis on technology and knowledge-based industries will create new markets and business opportunities... research and education are essential elements in the overall formula for success in promoting economic growth through technological change."

ACADEMIC AFFAIRS

ACADEMIC DEVELOPMENTS

OPERATIONAL PLANS

The preparation of operational plans has become an annual exercise in the Schools and Centers, following approval of the five-year Institute Strategic Plan at the January 1996 meeting of the Board of Trustees. In these plans, individual Schools and Centers spell out their operational objectives and targets, including budget requirements and activities planned for the year. A strong sense of teamwork, emphasizing support and positive action, characterized the preparation of the operational plans for 1997, attesting to a new era of participatory planning and budgeting at the Institute.

NEW PROGRAMS, NEW OPPORTUNITIES

■ DEGREE PROGRAMS

The high technology field of Mechatronics was established in the School of Advanced Technologies (SAT) in collaboration with the Technical University of Hamburg-Harburg and Siemens AG. The first student intake will be made in May 1997, while the first group of German students under the agreement will join the program in November 1997. Mechatronics, which integrates mechanics, electronics and information technology, is expected to be followed by the introduction of a program in Microelectronics.

Three degree programs became operational in 1996, namely Pulp and Paper Technology (PPT) and Urban Environmental Management (UEM), both in the School of Environment, Resources and Development (SERD) and a cross-School program in Water Supply, Drainage and Sewerage Engineering, to be offered by SERD and the School of Civil Engineering (SCE).

The UEM Program has three major components: a graduate study program, an outreach program/unit, and a R&D/technology transfer unit.

The PPT Program, which became operational in July 1996, will admit a projected initial student intake of 20 in January 1998. Advance Agro Plc. has pledged support for the construction of a new building, while the Government of Finland will provide 12 million Baht for laboratory equipment.

SERD and SCE are also collaborating in the newly introduced Integrated Tropical Coastal Zone Management Program.

With support from the French Government, the School of Management (SOM) launched a bilingual English and French program in September 1996. The first group of 16 students came from Cambodia and Laos.

■ DISTRIBUTED LEARNING

Following a strategic planning workshop in distance learning in October 1996, the Institute has firmed up its commitment to pursue distributed education approaches and enhance existing activ-

ities, initially in projects such as the Industrial Systems Engineering Diploma Program, which is offered at the AIT Center in Vietnam in collaboration with SAT. All being well, new ventures where distance learning partnerships can extend the Institute's role and competitiveness, will be explored.

■ ACADEMIC SUPPORT SERVICES

An impressive combination of support services represents an admirable and concerted effort by the Institute to meet its special responsibilities to students from disadvantaged academic backgrounds, without in any way compromising its high academic standard. These services, which are managed mainly by the Center for Language and Educational Technology in close collaboration with the Schools, include the academic support network, research writing program and tutorial support for third, fourth and fifth term students.

1996 ENROLMENT
DOCTORAL, MASTER'S AND DIPLOMA PROGRAMS*

	TERM		
	Jan	May	Sept
Doctoral			
D.Eng.	81	86	89
D.Tech.Sc.	52	50	53
Ph.D.	42	39	37
<i>Sub-total</i>	175	175	179
Master's			
M.Eng.	473	479	534
M.Sc.	255	276	185
MBA	168	118	218
<i>Sub-total</i>	896	873	937
Diploma	9	7	6
Total	2017	2103	2238

* Excluding post doctoral and research fellows.

STUDENT BODY

■ APPLICATIONS

Application trends saw notable improvements in 1996. 1254 applications were received for the intaking academic units in the September 1996 term, compared with 1213 in September 1995, and 1233 in September 1994. Application figures for the January 1997 term were also on the high side. The Institute received the largest number of applications from Nepal (195), Thailand (128), India (108), Sri Lanka (99), Vietnam (86) and Bangladesh (85).

The application pattern remains complex nevertheless, reflecting interactions between country, regional and specialization demand, and the availability of external scholarships.

With more time and resources given to support student recruitment and other promotional activities carried out by individual Schools and Programs, a more market-oriented admission culture is expected to emerge throughout the Institute. Targeted marketing efforts could further strengthen and stabilize the student application pattern.

1996 STUDENT ENROLMENT

Term	Schools*	Centers**
Jan	1122	50
May	1096	64
Sept	1182	87

* Excluding post doctoral and research fellows.

** Including trainees in the Program for Computer Applications Development, Bridging Program and Talkbase.

■ ENROLMENT

Student enrolment rose in 1996, as seen in the annual average enrolment presented below.

In the September 1996 term, there were a total of 169 self-supporting students (85 for the full period and 84 for three terms), compared with 40 and 83, or a total of 123, in September 1995. While commendable, viewed from the Institute's self-support student targets, the increase suggests the need to further strengthen the self-sustainability of the Institute's tuition fee funding. The crucial "bottom-line" number, that is, the full-fee equivalent, was 940 for September 1996, up from 855 in May 1996 and comparing favorably with the 915 termly target for 1996-97.

Full fee-paying enrolment is expected to further increase in 1997-98, averaging at 1147 and exceeding the 880 projected in the Institute Strategic Plan. Much of the increase is anticipated in the MBA program and the new interdisciplinary program in Mechatronics.

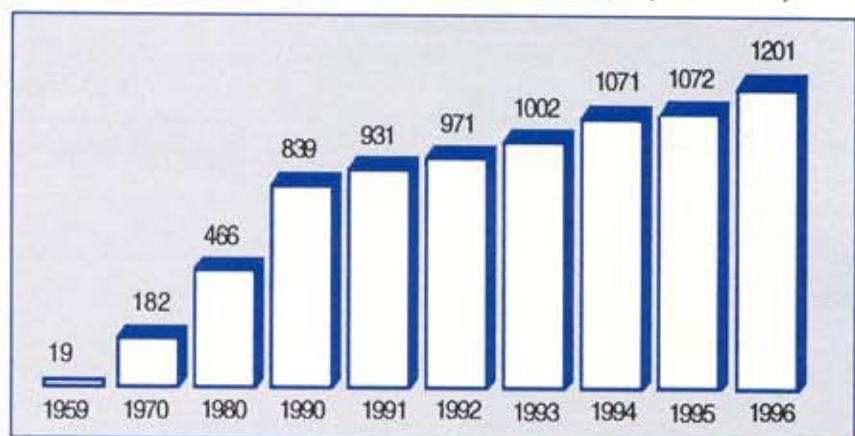
The number of non-fee paying degree program students rose from 212 in September 1995 to 268 in September

1996. Eighty-four of the non-fee paying enrollees were employee students on full salaries at the Institute, four were working students who were employed half-time. The September 1996 figure also included 40 students whose study periods were extended beyond the normal duration and whose tuition fees were waived, and 17 students who earned full fee waivers for their final term.

The most significant increase in the non-fee paying enrollees was due to the growing number of partial scholarship holders, who move from the paying to the non-paying phase of their study period (or the last two terms of the five-term Master's program). In the September 1996 term, there were 101 such students, compared with 60 a year ago.

Rising student enrolment has raised an urgent need for additional on-campus housing and the introduction of an integrated management information system that will support the Institute's forward planning, by providing enrolment distribution and student financial support data, and by linking key academic and administrative departments.

AVERAGE ANNUAL STUDENT ENROLMENT* (1959-1996)



* Including trainees in the Program for Computer Applications Development, Natural Resources Program, Talkbase, and Bridging Program, and students enrolled in the Special Program, Certificate Program, and Certificate of Advanced Studies.

ACADEMIC AFFAIRS

■ FEMALE STUDENT ENROLMENT

Among the distinct changes in the profile of the AIT student body is the growing number of female students.

Female student enrolment in the September 1996 term was 27.6% of total enrolment, compared with 26% in September 1995 and 22.8% in September 1994. In the Human Settlements Development Program, 56.9% of the total number of students were female. Schoolwise, female students accounted for 39.1% of total enrolment in SERD, 33% in SOM, 25.3% in SAT, and 11.7% in SCE.



1996 STUDENT ENROLMENT

by Country*			
	Jan	May	Sept
Azerbaijan			1
Bangladesh	59	50	57
Belgium		1	2
Bhutan	9	7	5
Cambodia	45	43	38
Canada	1		1
Chinese Taipei	32	27	30
Finland	1	1	6
France	3	2	9
Germany	1	1	1
Iceland			1
India	65	61	57
Indonesia	39	45	49
Japan	2	2	7
Kazakhstan	2	6	6
Kenya	2	2	2
Kyrgyzstan			1
RoK	9	6	7
Laos	21	22	20
Malaysia	6	6	7
Maldives	2	2	
Mongolia	5	6	10
Myanmar	35	35	41
Nepal	97	99	103
Norway			4
Pakistan	43	34	42
PNG	1	1	1
Philippines	41	38	42
PRC	89	85	93
Sri Lanka	53	50	50
Sweden	1	1	1
Switzerland	1	1	1
Thailand	342	343	394
USA	1	1	1
Vietnam	126	131	124
Yemen			1
Zambia	1	1	1
Total	1135	1110	1216

* Excluding PCAD trainees, post doctoral and research fellows and TALKBASE students.

by School**

	Jan	May	Sept
School of Advanced Technologies			
CSIM	57	96	102
ISE	60	110	109
TC	34	73	71
School of Civil Engineering			
GE	64	38	59
TE	24	13	20
IPM	11	11	22
SEC	87	52	112
WEM	68	37	64
School of Environment, Resources and Development			
AFE	53	53	36
AAS	21	69	51
BPT	20	21	23
EP	85	86	52
EE	108	110	69
HSD	84	84	51
STAR	70	71	47
School of Management			
IB	112	77	147
MOT	73	55	83

** Excluding Special Program, Certificate, and Certificate of Advanced Studies students.

GRADUATES

The December 1996 graduation, which added the first graduates from Kazakhstan to the AIT alumni roster, saw the total alumni figure surpass the 8000 mark. Details of the Institute's 1996 graduate record and awards for academic distinction are presented here.



1996 GRADUATE RECORD

by Degree				
	Apr	Aug	Dec	Total
D.Eng.	5	7	5	17
D.Tech.Sc.	4	1	7	12
Ph.D.	4	4	4	12
M.Eng.	98	73	108	279
M.Sc.	5	92	22	119
MBA	80		12	92
Dip.AIT	2		7	9
Total	198	177	165	540



by Program				
	Apr	Aug	Dec	Total
School of Advanced Technologies				
CSIM	2	1	42	45
ISE		2	51	53
TC		1	29	30
School of Civil Engineering				
GE	25	2	2	29
TE	12			12
SEC	35		4	39
WEM	32	1	1	34
School of Environment, Resources and Development				
AFE	2	16	5	23
AAS	3	19	6	28
EP		34	1	35
EE	2	43	6	51
HSD	2	33	5	40
STAR	1	24	1	26
School of Management				
IB	58		8	66
MOT	24	1	4	29
Total	198	177	165	540

by Country				
	Apr	Aug	Dec	Total
Bangladesh	15	5	5	25
Bhutan	2	2		4
Cambodia	4	13	2	19
Chinese Taipei	9	7	3	19
PRC	12	19	10	41
India	10	15	13	38
Indonesia	6	6	5	17
Kazakhtsan			2	2
Kenya			1	1
RoK	5			5
Laos	1	9		10
Malaysia	1	1	2	4
Maldives		2		2
Mongolia			1	1
Myanmar	7	4	3	14
Nepal	11	13	13	37
Pakistan	13	4	2	19
Philippines	9	6	6	21
Sri Lanka	12	9	6	27
Thailand	48	35	69	152
Vietnam	33	27	22	82

ACADEMIC AFFAIRS

■ GRADUATION AWARDS

April

Mr. Truong Hong Tien
(SCE, WEM) Vietnam
ALASTAIR M. NORTH PRIZE

Mr. Torsak Viravanichai
(SCE, SEC) Thailand
AOYAGI PRIZE

Mr. Mongkut Piantanakulchai
(SCE, TE) Thailand
BARBARA AND
JOHN HUGH JONES PRIZE

Mr. Teerawut Juirnarongrit
(SCE, GE) Thailand
CHIN FUNG KEE PRIZE

Ms. Kanokthip Sahasakmontri
(SOM, IB) Thailand
HAIDER RAZVI PRIZE AND
HIROMICHI SEYA PRIZE*

Mr. Xu Qiang
(SCE, WEM) PRC
HISAMATSU PRIZE

Mr. Zheng Peixi
(SCE, WEM) PRC
HODAKA PRIZE

Mr. Naveen Kumar
(SOM, MOT) India
JAMES A. LINEN III
MEMORIAL PRIZE

Mr. Abdul Samad Kazi
(SCE, SEC) Pakistan
MAHESH VARMA PRIZE

Mr. Vo Minh Tue
(SOM, IB) Vietnam
WILHELM HILL PRIZE

(Shown in parentheses are the award recipients' respective Schools and programs.)

August

Mr. Jagath Wickrama Rupasinghe
(SERD, AAS) Sri Lanka
HISAMATSU PRIZE

Mr. Kamal Kishore
(SERD, HSD) India
JAMES A. LINEN III
MEMORIAL PRIZE

Mr. Absar Ahmad Kazmi
(SERD, EE) India
ROBERT B. BANKS PRIZE

Mr. Wachara Mungwitkul
(SERD, EP) Thailand
SUKUM NAVAPAN PRIZE

Mr. Bhuwadeshwar Prasad Sah
(SERD, STAR) Nepal
TIM KENDALL MEMORIAL PRIZE

Ms. Sorada Yoenyongbuddhagal
(SERD, AFE) Thailand
YOH KUROSAWA PRIZE *

Mr. Pawan Preet Singh
(SERD, AFE) India
Y.Y. KISHIDA PRIZE

December

Mr. Surya Nepal
(SAT, CSIM) Nepal
HISAMATSU PRIZE

Ms. Supanon Chantaraprabha
(SAT, CSIM) Thailand
HISAMATSU PRIZE

Mr. Sumate Prapaitrakool
(SAT, ISE) Thailand
JAMES A. LINEN III
MEMORIAL PRIZE

Mr. Le Minh Tuan
(SAT, ISE) Vietnam
TIM KENDALL MEMORIAL PRIZE

Mr. Pitukpong Kinawong
(SAT, TC) Thailand
TELECOM-FINLAND PRIZE

Ms. Anchalee Krich-Anant
(SAT, ISE) Thailand
SHOICHIRO TOYODA PRIZE *

* Awarded by KEIDANREN in recognition of the best academic performance by a female graduate

GRADUATION SPEAKERS

At the 76th graduation on 18 April, Dr. Thanat Khoman, Chairperson Emeritus of AIT, received an Honorary Degree of Doctor of Technology and delivered the graduation address. With Dr. Thanat is M. L. Birabhongse Kasemsri, Chairperson of the AIT Board of Trustees.

Dr. Yongyuth Yuthavong, Director of the National Science and Technology Development Agency of Thailand, delivered the graduation address at the 77th graduation on 22 August. With Dr. Yongyuth are Prof. Pisudhi Karasudhi, Vice President for Development, and Prof. Roger G. H. Downer, President.

Addressing the 78th graduation on 12 December were Dr. Yong-Teh Lee (right), Chairman of TriGem Computer Co. Ltd., and H. E. Mr. Toshiki Kaifu (third from right), former Prime Minister of Japan who received an Honorary Degree of Doctor of Technology.



■ GRADUATION AWARD SPONSORS

ALASTAIR M. NORTH PRIZE

The Alastair M. North Prize is awarded from funds contributed in 1996 by Prof. Alastair M. North, former AIT President.

BARBARA AND JOHN HUGH JONES PRIZE

The Barbara and John Hugh Jones Prize is awarded from funds provided in 1994 by Prof. John Hugh Jones, former AIT Vice President for Academic Affairs.

CHIN FUNG KEE PRIZE

The Tan Sri Professor Chin Fung Kee Prize is awarded 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.

HAIDER RAZVI PRIZE

Mr. Syed Mushtaq Haider Razvi, sponsor of this prize which was established in 1995, served as Charge d'Affaires, Embassy of the Islamic Republic of Pakistan, Bangkok, and Permanent Representative of Pakistan to the United Nations Economic and Social Commission for Asia and the Pacific.

HISAMATSU PRIZE

The Hisamatsu Prize is supported since 1982 by Prof. Yoshihiro Hisamatsu, Technology Adviser for Nisshin Steel Co.Ltd., Japan, and former Dean of the Faculty of Engineering, University of Tokyo.

HIROYOSHI SHI-IGAI PRIZE

This prize is awarded from funds contributed by AIT Trustee Prof. Hiroyoshi Shi-igai of the Institute of Engineering Mechanics, University of Tsukuba, Japan, jointly with the AIT Water Engineering Management Program.

JAMES A. LINEN III MEMORIAL PRIZE

Presented in memory of the late Mr. James A. Linen, a Charter Founding Member and Life Member of the Board of Trustees from 1967 to 1988.

AOYAGI PRIZE

Supported by Prof. Yukio Aoyagi, former AIT faculty member.

MAHESH VARMA PRIZE

Supported by Prof. Mahesh Varma, former AIT faculty member.

ROBERT B. BANKS PRIZE

The Robert B. Banks Prize, named after former AIT President, Prof. Robert B. Banks, was first presented in 1994. It is supported by funds generated from various continuing education and consultancy activities in geotechnical engineering.

SUKUM NAVAPAN PRIZE

The Sukum Navapan Prize is awarded from funds presented by Dr. Sukum Navapan, AIT Trustee since 1992 and Chairman of the Navatane Group of Companies.

TIM KENDALL MEMORIAL PRIZE

Established in 1981 from funds provided by the United Kingdom AIT Appeal, in memory of the late Mr. R. M. Kendall, AIT Trustee from 1971 to 1981.

TELECOM-FINLAND PRIZE

The Telecom-Finland Prize is given from funds provided in 1991 by Telecom, Finland.

WILHELM HILL PRIZE

The Wilhelm Hill Prize is supported by Prof. Wilhelm Hill, AIT Trustee since 1993 and Head of the Strategic Studies Research and Publishing Unit, University of Basel, Switzerland.

Y.Y. KISHIDA PRIZE

Supported since 1992 by Mr. Yoshisuke Kishida, owner of Shin Norinsha Co., Tokyo, Japan, in memory of his son, Yoshiyuke.



ALUMNI

The swelling average annual enrolment, rising from 19 students in 1959 to 1201 in 1996 has created an impressive alumni body, which is composed of graduates from AIT's traditional disciplines and newly-introduced specializations.

Regular monitoring of the professional development of alumni speaks of a career mobility experienced by the majority of new graduates many of whom move from the ranks of professional staff to middle/senior management positions within a short period.



- 1 Includes graduates from the former programs in Computer Applications and Computer Science.
- 2 Includes graduates from the former program in Industrial Engineering and Management.
- 3 Includes graduates from the former programs in Hydraulic Engineering, Water Resources Engineering, and Irrigation Engineering and Management.
- 4 Includes graduates from the former program in Energy Technology.
- 5 Includes 291 graduates from the former program in Community and Regional Development.
- 6 Includes graduates from the former Natural Resources Program and Interdisciplinary Natural Resources Development and Management Program.

AIT ALUMNI DISTRIBUTION 1961-1996

by Degree

Doctor of Engineering	185
Doctor of Technical Science	44
Doctor of Philosophy	21
Master of Engineering	5,287
Master of Science	1,964
Master of Business Administration	346
Diploma	213
Total	8,060

by School and Program

School of Advanced Technologies	
Computer Science and Information Management ¹	578
Industrial Systems Engineering ²	747
Telecommunications	121
School of Civil Engineering	
Structural Engineering and Construction	904
Geotechnical and Transportation Engineering	966
Water Engineering and Management ³	980
School of Management	
International Business	73
Management of Technology	276
School of Environment, Resources and Development	
Agricultural and Food Engineering	864
Agricultural and Aquatic Systems	2
Energy ⁴	477
Environmental Engineering	846
Human Settlements Development ⁵	1049
Space Technology and Applications Research ⁶	177

Notes:

SCHOOL OF CIVIL ENGINEERING

Geotechnical Engineering

Transportation Engineering

(Formerly offered as the Geotechnical and Transportation Engineering Program; first student intake into the individual programs - Sept 1995; first graduation - Apr 1997)

Infrastructure Planning and Management

(First student intake - Sept 1995; first graduation - Apr 1997)

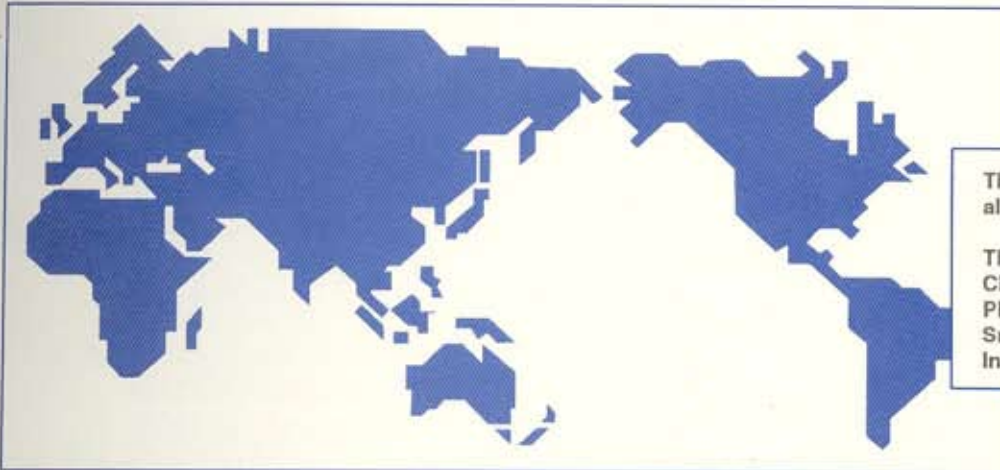
SCHOOL OF ENVIRONMENT, RESOURCES AND DEVELOPMENT

Agricultural and Aquatic Systems

(First student admission into the Master's Program - Jan 1996; first graduation - Aug 1997. To-date, two alumni graduated from the Diploma program)

Bioprocess Technology

(First student intake - Jan 1996; first graduation - Aug 1997)



The five largest groups of AIT alumni are from:

Thailand	1849
Chinese Taipei	777
Philippines	744
Sri Lanka	566
India	556

by Country of Residence

South East Asia, Pacific and Australia (49.98%)	South Asia and West Asia (20.27%)
Australia 325	Afghanistan 4
Brunei 10	Bangladesh 332
Cambodia 28	Bhutan 8
Fiji 1	India 284
Indonesia 367	Nepal 273
Laos 22	Pakistan 405
Malaysia 203	Sri Lanka 325
Maldives 3	Turkey 3
Myanmar 67	
New Zealand 7	North and South America and Europe (5.17%)
Papua New Guinea 8	Belgium 2
Philippines 473	Bolivia 1
Singapore 109	Brazil 1
Thailand 2085	Canada 58
Vietnam 321	Denmark 2
	France 14
East Asia (13.11%)	Germany 3
PRC 186	Italy 1
Chinese Taipei 620	Netherlands 1
Hong Kong 74	Norway 1
Japan 83	Spain 1
Kazakhstan 1	Sweden 1
RoK 87	Switzerland 3
Macao 2	United Kingdom 19
Mongolia 4	United States 285
Middle East (0.45%)	Africa (0.31%)
Bahrain 1	Egypt 1
Iran 2	Ethiopia 1
Kuwait 1	Ghana 2
Qatar 2	Kenya 5
Saudi Arabia 27	Malawi 3
United Arab Emirates 4	Nigeria 4
	Sudan 1
* Others (10.98%)	Tanzania 8

by Nationality

South East Asia and Pacific (48.86 %)	South Asia and West Asia (33.42%)
Brunei 10	Afghanistan 19
Cambodia 31	Bangladesh 547
Fiji 1	Bhutan 8
Indonesia 407	India 556
Laos 24	Iran 12
Malaysia 273	Nepal 436
Maldives 3	Pakistan 544
Myanmar 148	Sri Lanka 566
Papua New Guinea 8	Turkey 6
Philippines 744	
Singapore 28	North and South America, Europe and Africa (0.63%)
Thailand 1849	Belgium 1
Tonga 1	Bolivia 1
Vietnam 411	Canada 5
	Finland 2
East Asia (17.08%)	France 4
PRC 331	Egypt 1
Chinese Taipei 777	Ethiopia 1
Hong Kong 87	Ghana 2
Japan 54	Germany 2
RoK 114	Honduras 1
Macao 7	Kenya 2
Mongolia 5	Malawi 3
Kazakhstan 2	Netherlands 2
	Nigeria 1
	Sweden 2
	Tanzania 8
	UK 2
	USA 11

* Alumni whose addresses are unknown and alumni with two AIT degrees (839) and deceased alumni (46).

FACULTY

■ STRENGTH

Comparative faculty statistics in the September 1996 term and the May 1996 term provide evidence of sustained faculty strength.

There were a total of 184 faculty members in September 1996 (including 23 visiting, 22 associated and 12 affiliated), compared with 187 in May 1996 (including 23 visiting, 26 associated and 14 affiliated).

Of the 138 full-time faculty in September 1996, 96 were direct-hire while 42 were seconded, compared with 144 full-time faculty in May 1996, of whom 98 were direct-hire while 46 were seconded. The proportion of seconded faculty (30 per cent in September 1996 and 32 per cent in May 1996) was below the 50 per cent target. Faculty secondments are expected to decrease further, thus setting a trend for more recruitment of direct-hire and sponsored faculty positions.

On student: faculty ratio, the target ratio of nine to one still figures prominently. Clearly, the critical mass for the optimal delivery of postgraduate education must be a key criterion for establishing the appropriate ratios.

FACULTY HEADCOUNT SEPTEMBER TERM
1994, 1995, 1996

	1994	1995	1996
Overall	187	179	184
Long-term, full-time	128	133	138
Direct-hire	(80)	(89)	(96)
Seconded	(48)	(44)	(42)
Short-term visiting	6	11	7
Affiliated	19	13	12
Associated	34	22	22
Adjunct			5

FACULTY HEADCOUNT SEPTEMBER 1996 TERM

by Academic Rank	D	S	Total
Chair Professor	4		4
Professor	21	8	29
Associate Professor	40	15	55
Assistant Professor	23	10	33
Instructor		1	1
Visiting Faculty	11	12	23
Long-term	(8)	(8)	
Short-term	(3)	(4)	
Associated Faculty	17	5	22
Affiliated Faculty	6	6	12
Adjunct Faculty	5		5
Total	127	57	184

D Direct-hire
S Seconded

by Country	D	S	Total
Australia	1	1	2
Bangladesh	4		4
Belgium	1	3	4
Bulgaria	1		1
Canada	2	1	3
Chinese Taipei	1		1
Denmark	1	3	4
Finland		6	6
France	5	9	14
Germany	3	5	8
India	20	3	23
Japan		13	13
Korea		2	2
Lebanon	1		1
Myanmar	1		1
Nepal	4	1	5
Netherlands	3		3
New Zealand	2		2
Nigeria	1		1
Norway		1	1
Pakistan	2		2
PRC	2	1	3
Philippines	6		6
Sri Lanka	7		7
Sweden		1	1
Switzerland	1	1	2
Thailand	39		39
UK	4	6	10
USA	10		10
Vietnam	5		5
Total	127	57	184



The opportunity to pursue graduate studies with distinguished scholars from all over the world - within the context of Asia - draws promising young men and women to study at AIT.

■ FACULTY PUBLICATIONS

There were 643 faculty publications over 1996, including journal papers, proceedings, research reports and books. This output provides an indication of an active academic faculty, aware of the importance of publishing for their own professional advancement and the Institute's academic credibility. Throughout the Institute, there is strong recognition of the important role which internationally known faculty play in sustaining the high standard of teaching and research programs.

■ FACULTY DEVELOPMENT

Along with the School and Center retreats, the annual faculty development workshops contribute significantly to the professional and personal well-being of faculty. Most of the key recommendations of the April 1996 faculty workshop on academic quality audit and advisorship are being pursued actively, including the call to re-activate the Education Development Working Group and provide special financial support for book and journal orders placed through CLAIR.

1996 ACADEMIC ACTIVITIES

	SAT	SCE	SERD	SOM	ADPC	AITCV	CEC	CLAIR	CLET	RCC	Total
Publications											
Journal Papers/ Proceedings	40	46	91	17				2	3		199
Conference Papers	46	66	105	17			4	8	12		258
Research Reports		4	17						1		36
Books/Chapters in Books	7	10	7	7					5		32
Others*	39	18	38	3				17	3		118
	132	154	258	44			4	27	24		643
Sponsored and Grant Research											
Completed Projects	1	10	34	4				1	2	2	54
On-going Projects	10	33	96	14	4	1		4	1	2	165
	11	43	130	18	4	1		5	3	4	219
Continuing Education Activities											
Conferences	4		7								11
Workshops	2	2	28		6	11		2	8		59
Seminars	9	1	10	24		5					49
Short Courses	11	1	36		10	4	42	6		20	130
Special Lectures			12								12
	26	4	93	24	16	20	42	8	8	20	261
* Monographs, working papers, consultancy reports, reviews, academic unit research reports/ occasional papers, newsletters, reference materials, handbooks, lecture notes, etc.											



RESEARCH

The Institute is committed to region-oriented applied technological research and to academic subject-developmental research. In 1996 the Schools and Centers were involved in 219 sponsored and grant research projects. A few selected projects completed in 1996 are summarized in this section. A list of research projects in progress is found in the Appendix.

■ School of Advanced Technologies

Development and implementation of MRP II system: a feasibility study

Investigators: Erik Bohez, V. Wuwongse

Sponsor: Notes Printing Works, Bank of Thailand

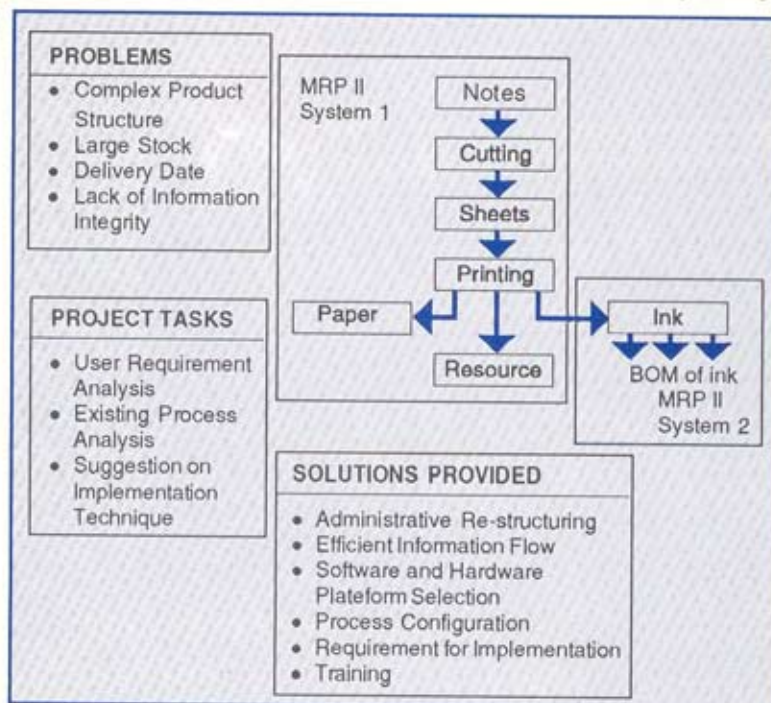
The Notes Printing Works of the Bank of Thailand produces Thai

banknotes, excise stamps, and revenue stamps. With production demands exceeding human capacity for production tracking and database maintenance, a computerized manufacturing resources planning (MRP II) became an urgent need. AIT was commissioned to develop a customized software for material requirements planning (MRP) and manufacturing resources planning (MRP II), to suit the specific production environment.

ing resources planning (MRP II), to suit the specific production environment.

To do this, a feasibility study and thorough analysis of the system were carried out. Initial data and information were collected.

Suggestions concerning MRP II requirements were presented to the Notes Printing Works. Other tasks dealt with the probability of interfacing the existing software with the MRP II system and the formulation of MRP implementation guidelines.



Applicability analysis of waterjet cutting in textile and leatherware industries

Investigator: J. R. Duflou

Sponsor: Bangkok Rubber Co. Ltd., Body Fashion (Thailand) Ltd.

Waterjet cutting is a manufacturing process that is capable of cutting non-conventional materials (e.g. composites, ceramics, and glass), by means of a high pressure waterbeam (up to 3800 bars). However, there is little available data pertaining to the relevant characteristics of different types of textiles, rubbers and leather (natural and artificial).

Unlike typical engineering materials, the cutting of these materials does not require the addition of abrasive to the

water beam. Owing to the anisotropy and high elasticity of some of these materials, it is useful to identify suitable cutting parameters and to determine the technical suitability of cutting these materials with non-abrasive waterjet techniques and the economic feasibility of

applying such methods.

This study was supported by industrial partners who saw opportunities in adopting these relatively new manufacturing methods. The Belgian Ministry of Cooperation provided an equipment grant.



A waterjet cutter and related high tech facilities support teaching and research in the ISE program.

■ School of Civil Engineering

Investigation of traffic-induced vibration and its effect on the integrity and stability of Pra Pathom Chedi, Nakorn Pathom

Investigators: W. Kanok-Nukulchai, N. Phien-wej

Sponsor: Wat Pra Pathom Chedi

Thailand's largest chedi (pagoda) is put at risk by vibration due to heavy traffic volume in the surrounding areas. Vibration levels were investigated and monitored using geophones, which measured peak particle velocity and acceleration. Data were analyzed using GRL - RSVP (response of soil and structural vibration program) software. A preliminary evaluation of the effects of vibration was carried out and attenuation of maximum particle velocity with distance was investigated. An in-depth structural dynamic analysis of the pagoda allowed a more precise evaluation of the response of the structure to the vibration, using findings from the field and laboratory investigations.



Wat Pra Pathom Chedi

Optimal production planning under stochastic lead times

Investigator: O. Fujiwara

Sponsor: JICA

This research project concentrated on a multi-part, single-product, single-stage assembly system, with random part procurement lead times and product demand arrival. Earlier literature on the subject matter only dealt with the issue of when to order each part, not on its demand arrival. This research considered the issues of when to order and how much to order in a stochastic environment. Thus, the problem setting was realistic and applicable, although the nature of the problem became complex.

Construction management strategy for mass housing contracts

Investigators: S. O. Ogunlana,

C. Charoenngam

Sponsor: National Housing Authority, Thailand

Cost and time overruns and quality shortfalls characterized many NHA housing construction projects in the past. In anticipation of a four-fold increase in NHA projects under Thailand's 7th National Development Plan, NHA needed effective construction management strategies. This study analyzed NHA's current construction management system and technology use and proposed appropriate improvements.

Load tests of a five-storey hospital

Investigators: P. Nimityongskul,

C. Choeypunt

Sponsor: Nakorn Pathom Province

An experimental in-situ load test was conducted to verify the structural integrity of a five-storey hospital building, in particular the load carrying capacities of beams, columns and piles. Codes specified by the American Concrete Institute were used in the testing.

Interaction of non-woven geotextiles with locally available soils on soft ground

Investigator: D.T. Bergado

Sponsor: Polyfelt GesmbH, Linz, Austria

In coastal plains, earth structures are subjected to large settlements, unstable slopes, and large lateral movements. Mechanical stabilization of earth (MSE) embankments involves the insertion of foreign materials (strong in tension) into the backfill soil (strong in compression) to form a strong composite material. MSE construction minimizes lateral spreading and slope instability. Through three full scale embankment tests, using cheap, locally-available backfill soils reinforced with Polyfelt geotextiles, the project confirmed the advantages of MSE construction on weak grounds.

Transportation network in developing countries

Investigator: Y. Okuyama

Sponsor: JICA

Engineering review of Pantabangan and Masiway Dams (hydrological aspect)

Investigator: T. Tingsanchali

Sponsor: National Irrigation Administration, Philippines

In July 1990 an earthquake with a magnitude of 7.7 on the Richter scale slightly damaged the Pantabangan and Masiway Dams in the Philippines. This engineering review studied methods used to collect hydrological data and estimate maximum probable flood. Available topographical data downstream of the dams were examined and additional surveys recommended as needed. The review also investigated flooding downstream of the dams, in the event of dam breakage caused by seismic shocks or unexpected flooding in severe typhoons. It evaluated the current system of flood warning downstream of the dams, reservoir operation and sufficiency of spillways, taking into account existing and anticipated conditions.

Flood modeling program in Thailand

Investigators: S. Vongvisessomjai,

S. A. Nielsen, H.C. Ammentorp

Sponsor: Danida

Southern Thailand experienced its worst flood in November 1988, with losses estimated at five billion Baht. Some 400 deaths were reported. AIT and the Danish Hydraulic Institute collaborated in a project aimed at introducing a flood forecasting capability by conducting hardware and software training at flood relief centers, supporting the actual operation of real time flood forecasting systems for focus areas, improving the capability of the Royal Irrigation Department in flood control planning by transferring adequate modeling systems and supporting their application. The project enhanced the capability of concerned officials to plan, design and implement flood mitigation measure and supported the establishment at AIT of a permanent training capability in mathematical modeling for real-time flood forecasting and flood control.

This study showed the actual pattern of cargo flow in international ports in Thailand and the estimation of future cargo volume for each port. Changes in ship size and relevant economic trends were duly considered.

■ School of Environment, Resources and Development

Pond dynamics collaborative research support program

Investigators: C.K. Lin,

J. Szyper, P. Edwards

Sponsor: USAID

Launched in 1987, this project has vastly improved our understanding of how management practices affect the dynamics of fertilized tilapia ponds in tropical climates. Its findings have provided useful inputs to the formulation of fertilization guidelines in Thailand and Indochina.

As part of this program, research studies were carried out on campus and at fisheries stations belonging to the Royal Thai Government. Recently, on-station research in Northeast Thailand was launched in collaboration with the Department of Fisheries. Close attention will be given to studies in rainfed, deep water ponds which are more representative of farm conditions in the area.



Aerial view of 400 sq. m. earthen ponds and 200 sq.m. earthen ponds with duck houses in northeast Thailand.

Sustainable natural resource management in Sangthong District, Laos

Investigator: Gopal B. Thapa

Sponsor: Lao-German Forestry Project

Adopting an area approach to natural resource management planning, this

study analyzed the causal nexus of natural resource degradation in Sangthong District, using information obtained through rapid appraisal and household survey methods. Policy measures were suggested to control the depletion of resources.



Natural resource degradation has reduced areas of Sangthong District into a wasteland.

Acid rain and emission reduction in Asia

Investigators: R.M. Shrestha, S.C. Bhattacharya

Sponsor: ADB

This study, a part of an international collaboration among research institutions in Asia, Europe and USA, focused on policy analyses pertinent to emerging acid rain problems in various parts of Asia, through the development of RAINS-ASIA, an integrated micro-computer based assessment model.

An energy/emission and socio-economic database for selected Asian countries was prepared at sub-country regional levels and used as inputs to the RAINS-ASIA model. The study monitored atmospheric sulphur dioxide concentrations in selected Asian countries and carried out activities to support national institutional building, information dissemination, and regional outreach. A regional symposium on reducing acid rain emissions in Asia was organized and a network of national focal centers was established for the purpose of preparing energy/emissions database and monitoring sulphur dioxide concentrations.

Policies for rational use of energy in developing countries

Investigator: G.V. Dang

Sponsor: EC

The project, a part of the COPED research program of activities, explored and assessed policy changes which affect efficient rational use of energy in developing countries.

A comparative analysis was conducted to highlight lessons drawn from selected countries. Developing countries which face financial constraints to pay for energy imports have a good reason to develop strategies which stress rational use of energy.

Women and land systems in China

Investigators: G. Kelkar, W. Yunxian
Sponsors: IDRC/NORAD

China's efforts in the 1950s to empower women by giving them access to land and economic resources proved successful. This research studied the Chinese experience and evaluated significant changes in women's role, resulting from the introduction of the rural respon-

sibility system in the 1970s. The work included a comparative analytical reference to India.

The study sought to evolve development strategies for women, based on a historical/political process of formulating and implementing policy to extend familial and social equality and economic independence to women in agrarian China and India.



Active participation in agriculture and other economic activities has significantly improved the role of women in rural communities in China.

Preparation of current land use map for the Western Seaboard Regional Development master plan

Investigator: K. Honda,
S. Raj Pathak, N. Van Dai
Sponsor: JICA

Current land use maps were prepared for six provinces namely Kanchanaburi, Samut Songkhram, Ratchaburi, Prachuab Khirikhan and Chumphon.

The methodology adopted was visu-

al and digital interpretation of LANDSAT TM images in the scale of 1:100,000, with rigorous ground truthing. A new GIS database was developed using the result of interpretation and various other kinds of existing maps.

The study demonstrated a real application of RS and GIS technologies and their integration in the planning process. This newly developed GIS database will be utilized by experts from various fields in planning and decision making.



A satellite image showing current land use of Samut Songkhram.

School of Management

Investment opportunities in infrastructure development in Asia

Investigators: J. P. Gupta, L. M. Johri,
L. M. Pandey, M. Speece
Sponsor: EC

Using a demand forecast and policy framework analysis, this research focused on a study of investment requirements in infrastructure development in China, Korea, India and Thailand.

Some SOM projects in progress

Project financing

Investigator: J. P. Gupta
Sponsors: EC/French Government

Most Asian countries which lack financial, technical and managerial resources to meet infrastructure investment turn to partnerships with industrialized countries for help. These partnerships, in particular Euro-Asian partnerships in the power and transport sector, are the focus of this research.

In many cases, the funding structures of these partnerships, many of which are implemented using project financing techniques based on risk-sharing among the partners, should be modified to ensure equal benefits to all concerned.

Multi-cultural management: European and Asian perspectives

Investigators: F.W. Swierczek,
G. Hirsch; *Sponsor:* EC

Euro-Asian business relationships, in the form of strategic alliances and joint ventures, are increasing. This study seeks to give both European and Asian managers a better understanding of how cultural considerations influence the organization and management of Euro-Asian business partnerships.

Strategies and approaches to build successful joint ventures will be developed during the course of this study. A conceptual framework, which looks at the impact of culture from the European and Asian frames of reference, has been completed and some of the resulting papers have been published. A questionnaire, to be used for further empirical research, is being developed.

OUTREACH

In 1996 the Institute laid the foundation for new strategic developments in support of its outreach mission.

Under development is the Program for Professional Practitioners (PPP), which will be offered by the Schools and Centers. The PPP is designed for professionals who are unable to attend full-time continuous studies, but who require technical updating and upgrading in order to advance in their field. The Executive MBA Program proposed by the School of Management and approved in principle by the Senate comes within the PPP framework.

In 1996, no fewer than 261 conferences, seminars, workshops, short courses and special lectures were conducted by the Schools and Centers.

School of Management

MOTIC The Management of Technology Information Center carries out core outreach activities for SOM. Through regular executive seminars, MOTIC facilitates networking between business associations, companies and managers based in Asia and the Pacific and those in Europe and North America. These networking efforts are expected to provide inputs to the proposed establishment of a Global Executive Management MBA.

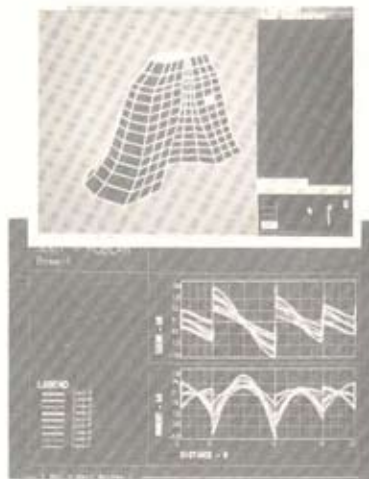
20

■ SCHOOL-BASED SPECIALIZED CENTERS

Specialized centers within the Schools provide focal points for outreach activities.

School of Civil Engineering

ACECOMS In 1996, the Asian Center for Engineering Computations and Software, SCE's software development and training arm, completed the design of a box girder for the Rama VIII bridge in Bangkok and conducted the 9th and 10th sessions of the M/SEAP workshop series in microcomputer application and practice in structural engineering. M/SEAP-9 was held at AIT and M/SEAP-10 in Bangladesh and Sri Lanka.



Above and directly above: Software developed by ACECOMS for structural analysis and design. Finite element analysis of an ancient chedi (pagoda) used by SCE and ACECOMS to study the effects of traffic vibration.

REMC The recently established Regional Environmental Management Center is carrying out a 19 million Baht research project for the Public Works Department of Thailand.

Planning is underway for a third SCE center, to be named the Transportation Research Center. A School-wide outreach activity in 1996 was an international conference on urban engineering in Asian cities in the 21st century, which was held in November.

School of Advanced Technologies

SKILLS CENTER Since its establishment in April 1996, the Skills Center has been conducting short courses for technical personnel from industry, developing and marketing software for industrial use, and carrying out research and consultancy.

School of Environment, Resources and Development

GAC The Geographic Information Systems Applications Center conducts training and provides technical facilities to support the Space Technology Applications and Research Program.

GENDEV The Gender and Development Studies Center acts as a resource to promote and develop the gender dimension across AIT's range of subject areas.

AQUACULTURE Extensive training and R&D activities in aquaculture are being carried out in Cambodia, Northeast Thailand, Laos and Vietnam

HABITECH As a center for human settlements technologies, Habitech provides technology and services to institutions, NGOs, community groups, and private sector ventures involved in housing projects.



Habitech emphasizes affordable construction techniques aimed at improving the quality of life and living environment of communities.

■ ASIAN DISASTER PREPAREDNESS CENTER (ADPC)

ADPC marked its first decade in 1996, witnessing the growth of its alumni body from various countries in the region and the increasing demand for in-country disaster management training. These positive trends strengthen continuing efforts to ensure the Center's long-term sustainability. Closer collaborations are being forged with School faculty in the delivery of disaster management courses and provision of technical assistance. Linkages with SCE and the Gender and Development Studies Center and Human Settlements Development Program, both under SERD, are being explored.

■ CENTER FOR LANGUAGE AND EDUCATIONAL TECHNOLOGY (CLET)

CLET's remit has expanded over the past five years. Its areas of responsibility now cover language support services, development of teaching-learning systems and general studies. These are carried out through on- and off-campus teaching, classroom-based research and regional outreach activities. CLET plays key roles in the implementation of the AIT Aquaculture Program, the second phase of the Swiss-AIT-Vietnam Management Development Program in Ho Chi Minh City, and the operation of the revitalized language and training unit at the Hanoi-based AIT Center Vietnam.

■ CONTINUING EDUCATION CENTER (CEC)

CEC collaborates with AIT academic units and faculty in developing up-to-date training curricula, organizing international conferences, and cultivating potential partners and clients for its training courses and consultancy services. With a view to serving as a model technology-based learning center for continuing education, CEC is working towards establishing a building complex equipped with up-to-date multi-media training facilities for the development and delivery of training programs. The complex will provide office and hostel facilities and will be ergonomically designed to Asian standards.

■ CENTER FOR LIBRARY AND INFORMATION RESOURCES (CLAIR)

CLAIR provides adequate and affordable information services as an important academic support component for learning and teaching. Training and outreach programs are carried out by four self-sustaining units namely, GERIC, ENSIC, IFIC and RERIC, which are responsible for the AIT Technical Information Access service to outside users. They also offer current awareness services and other outreach activities.

■ REGIONAL COMPUTER CENTER (RCC)

RCC conducts programs in computer applications development, organizes tailored courses to suit clients' specifications, and provides consultancy service in software and hardware selection, computer-aided design, and other related topics. RCC also administers and maintains AIT's network infrastructure, the *AITnet*, which links LANS and information servers in 12 major buildings throughout the campus, using a 10 Mbps Ethernet backbone.

VIETNAM

In Vietnam, AIT's focal points for outreach activities are the Hanoi-based AIT Center Vietnam (AITCV) and the Swiss-AIT-Vietnam (SAV) Management Development Program in Ho Chi Minh City.

Since its establishment in February 1993 as AIT's first satellite campus in the region, AITCV has enabled the Institute to combine its brokering, management and educational roles in a high-demand area at a crucial period in Vietnam's development.

AITCV now offers a Belgian Government-supported Diploma Program in Industrial Systems Engineering (ISE), introduced in 1995. Qualified graduates from this program may seek admission to the Master's program at AIT, so may qualified graduates of the Swiss-supported Management Development Program in Ho Chi Minh City.

Collaboration between AIT's Vietnam-based activities and the Schools and Centers is expected to broaden. In Hanoi, a two-stage Master's program in Energy, patterned after the ISE format, is under development. Future AITCV offerings are being considered in public administration, regional and rural planning, environment, natural resources management and planning, urban development planning and environmental management, postharvest and food process engineering.

Under negotiation is a new MOU with the Ministry of Education and Training for the continued use of AITCV's present building. Efforts to develop a campus in Thach That are continuing.

In Ho Chi Minh City, the Swiss Development Cooperation has agreed to support the next phase of the SAV Program, starting 1 January 1997.

RESOURCES AND ADMINISTRATION

RESOURCE GENERATION

ACHIEVEMENTS

RENEWAL OF COLLABORATIONS

Of the major collaborations renewed in FY 1995-96, the largest were those signed with the Royal Thai Government and various Thai state enterprises and educational institutions (cumulative estimated value: US\$ 8.4 million), followed by our renewed collaboration with Finland (estimated value: US\$7.9 million), in support of the continued operation of the Telecommunications Program and AITCV and the establishment of the Pulp and Paper Technology Program. Another new program to which special support was extended was Bioprocess Technology. Germany provided 10 Master's scholarships for the program's first student intake in January 1996.

NEW COLLABORATIONS

In Thailand, the most significant new institutional collaboration was signed with the Chulabhorn Research Institute. This collaboration paved the way for the establishment of the joint AIT/CRI Doctoral and Master's programs in environmental toxicology, technology and management. Other Thai institutions signed new collaborations for joint research in bioprocess technology. Scholarship support was the main component of new collaborations with the Thai private sector, as well as with Indonesian institutions and the European Commission.

INSTITUTIONAL COLLABORATIONS

Thailand AIT carried out a training project for Deputy Governors from the Ministry of Interior and a flood protection design project for Thammasat University, Rangsit campus, as part of its collaboration with the Ministry of Finance in the construction of a sports complex for the 13th Asian Games.

COLLABORATIONS RENEWED AND TYPE OF SUPPORT PROVIDED
FY 1995-96

Donor	Scholarships	Operating Grant	Faculty Secondment	Equipment	Others*
GOVERNMENTS					
Austria	•				
Chinese Taipei	•				
Finland	•	•	•	•	
France	•	•	•		•
Germany	•				
Indonesia	•				
Japan	•	•	•	•	•
RoK	•		•		
New Zealand	•				
Norway	•		•		•
Sweden	•		•		•
Thailand	•	•			•
UK	•				
PRIVATE SECTOR					
Finland	•				
Germany				•	
Japan	•				•
Thailand	•			•	•
FOUNDATIONS					
Japan	•				
USA	•				

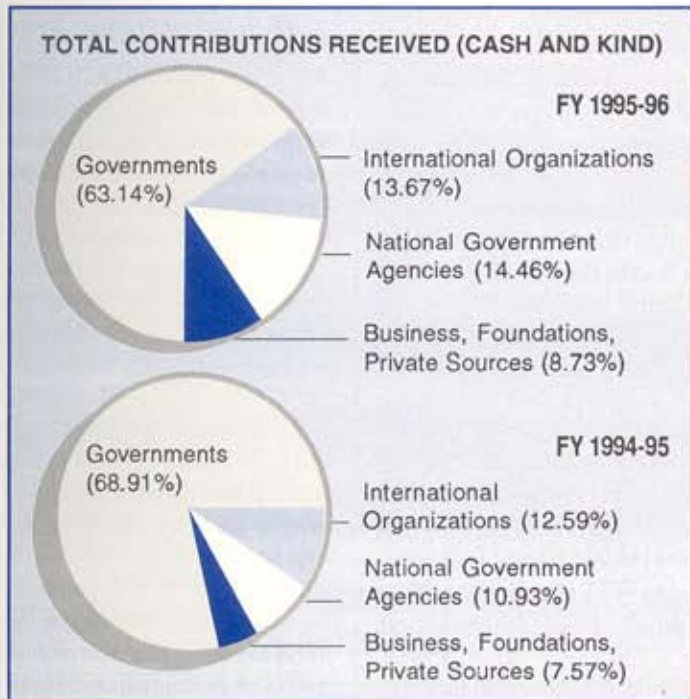
NEW COLLABORATIONS AND TYPE OF SUPPORT PROVIDED FY 1995-96

Donor	Scholarships	Equipment	Others*
GOVT. INSTITUTIONS			
Indonesia	•		
Germany			•
Thailand	•		•
INT'L. ORGANIZATION			
EC	•		
PRIVATE SECTOR			
RoK		•	
Thailand	•	•	

* Others include support to research, continuing education and related activities.

CIS Efforts to establish collaborative training and educational programs with the newly independent countries of Kazakhstan, Turkmenistan, Uzbekistan, Tajikistan and Kyrgyzstan, are continuing. The parties in agreement will intensively work together to seek

financing from unilateral, bilateral and/or multilateral agencies. The Ministry of Higher and Secondary Education in the Republic of Uzbekistan has expressed support to AIT's commitment to the Japanese Government to recruit more Master's students from Central Asia.



Cambodia In mid-1995 AIT signed MOUs with the Ministry of Education, Youth and Sports, the Ministry of Foreign Affairs and International Cooperation, the Fisheries Department, and the Royal University of Agriculture. In June 1996 AIT signed another MOU with the Ministry of Education, Youth and Sports for the development and implementation of a one-year post-graduate diploma program in environmental management. During the year, eight faculty members from four universities in Cambodia attended a one-term course which was supported by Sida and coordinated by CEC.

Laos AIT's current collaboration with the Laotian Government covers the period FY 1995-96 to FY 1997-98, providing nine Master's scholarships yearly.

**FACULTY AND STAFF
SECONDMENTS FY 1995-96**

Country/Organization	Man Months
Governments	
Australia	18
PRC	12
Chinese Taipei	1
Finland	38
India	16
Japan	147.5
RoK	37
Norway	17
Sweden	12
Switzerland	31
USA	14
European Community	
Belgium	62.5
CEC	29
Denmark	112
France	85.5
Germany	44.5
United Kingdom	83.5
International Organizations	
ASEP	7
EU	1
European Space Agency	12
IUCN	21
UNEP-EAP/AP	12
WWF	24
Business, Industry and Others	
Others	12

PROSPECTS

■ DONOR GOVERNMENTS

The largest prospective renewal is expected from Sida for the period July 1996-December 1999 (estimated value: US\$7.4 million). The next largest is a proposal for Japan's annual renewal for 1997-98 (estimated value: US\$7 million).

Other prospective renewals are expected from the following donor governments: Austria, Belgium, Canada, PRC, India, New Zealand, Norway, the Philippines, Switzerland, and Thailand. A number of these prospective renewals have been modified since their first submission, to incorporate the new development goals and orientations adopted by some donors.

■ THAI STATE ENTERPRISES

New human resource development and personnel recruitment programs with different Thai state enterprises are in the planning stage. As a condition for future renewals, some of them have requested to conduct an evaluation of their on-going academic cooperation programs with AIT.

Funding support to enable their staff to attend academic programs is under consideration by the Security and Exchange Commission (for the CSIM and MOT Programs) and the Petroleum Authority of Thailand (for the EE and Energy Programs).

Together with the Chulabhorn Research Institute (CRI) and the Faculty of Science at Mahidol University, AIT will submit to the Thai Ministry of University Affairs a joint proposal to undertake a higher education development project in science and technology, providing 15 scholarships annually for five years (5 Ph.D. and 10 Master's), to support qualified Thai students in the CRI/AIT Program in environmental toxicology, technology and management.

RESOURCES AND ADMINISTRATION

PROSPECTIVE RENEWALS AND PROSPECTS AND TYPE OF SUPPORT REQUESTED

Donor	Scholarships	Operating Grant	Faculty Secondment	Equipment	Others*
GOVERNMENTS					
Austria	•				
Belgium	•				
Canada	•				
PRC	•				•
India					•
Japan	•	•	•	•	•
New Zealand	•	•			•
Norway	•				
Philippines					•
Sweden	•		•		•
Switzerland	•	•	•		•
GOV'T INSTITUTIONS					
Nepal					•
Peru					•
INT'L ORGANIZATIONS					
ADB					•
EC	•				
EDUCATIONAL INSTITUTIONS					
Thailand					•
Norway			•		
PRIVATE SECTOR					
Japan					•
Thailand					•

(Renewals refer to pending proposals with traditional donor governments.

Prospects refer to proposals submitted to potential new partners).

*Others include support to research, continuing education and related activities.

■ MARKETING

STRATEGIC PLANNING WORKSHOP

A strategic planning workshop on marketing AIT was held on 19-20 February under the co-sponsorship of GTZ. It is envisioned that the responsibility for centralized marketing will be placed in a small highly qualified and experienced marketing unit to be headed by a professional marketing officer and attached to the office of the VPD. Decentralized marketing functions will be the responsibility of the Schools and Centers, with coordinating procedures to be established between them and the proposed marketing unit. The unit will develop a corporate marketing plan and market information system for the Institute.

AITAA MARKETING WORKSHOP

The Asian Institute of Technology (AIT) and the AIT Alumni Association (AITAA) organized a marketing workshop on 15-16 July. Representatives from AITAA national chapters presented and discussed draft marketing strategies at the country level. The country-level strategies will be confirmed following consultations between the individual representatives and their respective Chapters.

Dr. K. Ramanathan (IEM'82), a faculty member in the School of Management, assisted in conducting the workshop. Former AIT President, Dr. Alastair M. North, and President of AITAA, Mr. Surendra Shrestha, presided over the workshop.

■ INSTITUTIONS

With Asian institutions:

National University of Lao Project: In collaboration with the Midwest Universities Consortium for International Activities, Inc. (MUCIA), USA, AIT will provide experts and consultancy services to the National University of Lao Project of which MUCIA is a lead partner. A funding proposal has been submitted to ADB.

Expressway and Rapid Transit Authority of Thailand: Under discussion is a project management training course to be conducted by the School of Civil Engineering.

Centre for Water Resources Development and Management (CWRDM), Nepal. Under discussion is a joint collaboration in water resources management training programs and research projects.

With non-Asian institutions:

Norwegian Institute of Science and Technology: Under request is the secondment of a senior faculty to the Pulp and Paper Technology Program in 1997.

Immediately after FY 1995-96, cooperation agreements were signed with the **Interstate Institute of Technology St. Gallen, Switzerland**, for an International Network on Reverse Engineering and with **C.U.S.T. University Blaise Pascal (Clermont Ferrand 2), France**, for a pre-agreement in international cooperation in geotechnical engineering, in association with the French Embassy Regional Cooperation Service.

Towards the end of 1996, technical cooperation agreements were signed with **L'Universite Pierre et Marie Curie (Paris 6)** and the **National Council of Science and Technology of Peru**.

CENTRAL ADMINISTRATION FUNCTIONS

Significant improvements were introduced in central administration functions over the last decade.

Staff recruitment for central administration local hire positions was maintained at a headcount of 200 despite a 70% increase in student numbers.

Reductions were achieved in KWh energy consumption (down to 15% per staff and student and 10% per square meter of building space), expenditure for campus-wide services (down from 20% to 10% of Central Fund expenditures), and aged receivables, i.e. three months old or more (down from 50% to 20% of total receivables). Insurance claims for losses due to theft also dropped.

Another significant change was the introduction of an improved housing allocation system.

The anticipated introduction of a campus-wide management information system, computerization of vital operations, such as visa processing, human resources management/payroll, catering and financial operations, and other developments are expected to lead to further improvements in 1997.

In the financial area, priority will be given to implementing an effective account receivable collection function, re-developing the budget control system, integrating the inventory system and related value transaction system into one program, and computerizing investment control.



■ ONE-STOP BENEFITS ASSISTANCE CENTER

New initiatives were taken to provide a one-stop benefits assistance center for faculty and staff through the operations of the Human Resources Office. The initiatives included the introduction of individualized orientation sessions for incoming faculty and staff and wider dissemination of information through published materials and the AIT Home Page on the Internet. A new IFS Blue Cross major medical scheme was implemented, and reimbursement procedures for educational expenses were streamlined.

■ ENERGY CONSERVATION

New measures are underway to support Institute-wide energy conservation. A chilled water storage tank will be installed to help reduce peak electricity demand on campus. The on-going energy conservation campaign will be intensified through joint activities to be initiated by the Environmental Engineering and Energy Programs. Classrooms and bathroom/toilet facilities will be redesigned to increase their energy efficiency.



Working and living on campus are a rewarding experience. Combining the relaxed atmosphere of a small town with the amenities of an urban community, the AIT campus provides a convivial environment for study and leisure.

Professional development courses offered in 1996 included training in English language proficiency and computer literacy, as well as a wide range of off-campus skills upgrading courses.

Further improvements in faculty and staff support are expected in 1997, with the imminent standardization of job descriptions and issuance of updated P&P statements. These developments will be complemented by strict observance of officially sanctioned recruitment policies and procedures and implementation of a systematic process for employee performance evaluation.

■ TELECOMMUNICATION FACILITIES

1996 saw the installation of additional overseas card phones in the library and dormitory areas, the commencement of services offered by the Klong Luang Post Office, registration of a new AIT post box number in Klong Luang, introduction of a credit system to handle mail at the AIT post office, replacing the franking machine, and arrival of a new PABX machine with provision for 2,000 extension lines. Another PABX machine is proposed to be acquired in 1997 to support telephone connections to student dormitories and villages.



RESOURCES
AND ADMINISTRATION

SUMMARY OF CONTRIBUTIONS (CASH AND KIND) FY 1995-96

GOVERNMENTS

Australia	0.39
Brunei	0.18
Canada	0.18
People's Republic of China	0.17
Chinese Taipei	0.89
Finland	1.68
India	0.21
Japan	10.46
Republic of Korea	0.41
Malaysia	0.04
New Zealand	0.32
Norway	3.27
Pakistan	0.07
Philippines	0.41
Sweden	9.79
Switzerland	2.61
Thailand	8.33
United States of America	1.99
European Community	
CEC	2.34
Belgium	1.08
Denmark	4.76
France	3.75
Germany	4.81
Netherlands	1.89
United Kingdom	3.11
<i>Sub-total</i>	63.14

INTERNATIONAL ORGANIZATIONS

ADB	1.47
ASEP	0.03
Commonwealth Secretariat	0.15
ESA	0.21
ESCAP	0.91
EU	0.01
FAO	0.16
ICIMOD	0.13
ILO	0.12
IUCN	0.64
Mekong River Commission Secretariat	0.06
SEAMES	0.02
UN	0.22
UN University	0.17
UNCHS	0.28
UNDP	1.87
UNEP	5.88
UNESCO	0.17
UNICEF	0.04
UNIDO	0.20
WHO	0.56
World Bank	0.15
WWF	0.22
<i>Sub-total</i>	13.67

NATIONAL GOVERNMENT AGENCIES

<i>Australia</i>	
University of Technology, Sydney	0.02
<i>Austria</i>	
International Atomic Energy Agency	0.01
<i>Bangladesh</i>	
International Center for	
Diarrhoeal Disease Research	0.56
Rangtur Dinajtur Rural Services	0.07
Rural Employment Sector Program	0.07
Rural Development Board	0.14
National Board Revenue	0.69
<i>Bhutan</i>	
Education Department	0.06
Ministry of Agriculture	0.06
Royal Civil Services Commission	0.17
<i>Canada</i>	
IDRC	0.14
Marine Institute	0.05
University of British Columbia	0.03
<i>People's Republic of China</i>	
China International Center for Economic	
and Technical Exchange	0.01
<i>Denmark</i>	
Danish Hydraulic Institute	1.04
<i>Fiji</i>	
Forum Secretariat	0.02
<i>Finland</i>	
University of Tampere	0.01
<i>Germany</i>	
University of Dortmund	0.10
<i>Ghana</i>	
Social Security National Insurance Trust	0.03
<i>Hong Kong</i>	
Auxiliary Medical Services	0.02
<i>India</i>	
Central Leather Research Institute	0.01
<i>Indonesia</i>	
Aasmi Project	0.01
Agency for Agricultural Research	
Development	0.41
Bakornas - PB	0.12
Christian University	0.03
Dept. of Education and Culture	0.04
Higher Education Project (ADB)	0.17
Ministry of Forestry	0.01
Ministry of Health	0.01
Pasudan University	0.04
Petra Christian University	0.01
Third Community Health and Nutrition	0.03
University Atma Jaya, Yogyakarta	0.06
University of Surabaya	0.01
<i>Japan</i>	
Asian Productivity Organization	0.03
Central Research Institute of	
Electrical Power Industry	0.03
Department of Planning and Program -	
Fasid	0.03
Remote Sensing Technology Center	
of Japan	0.26

Malaysia

Batu Lintang Fishery Station	0.01
Ministry of Education	0.82
Ministry of Primary Industries	0.01
RISDA	0.07
Sarawak Housing and Development	0.03
Selangor State Secretariat	0.01
Surhanjaya Sekuriti	0.01
Universiti Sains Malaysia	0.01
Urban Development Authority	0.01
<i>Nepal</i>	
Agricultural Development Bank of Nepal	0.02
Nepal Agroforestry Foundation	0.01
Water and Energy Commission	
Secretariat	0.06
<i>Netherlands</i>	
Institute of Social Studies	0.17
Wageningen Agricultural University	0.03
<i>Pakistan</i>	
Kalan Integrated Development Project	0.02
Punjab College of Business Administration	0.07
<i>Papua New Guinea</i>	
Dept. of Agriculture and Livestock	0.01
<i>Philippines</i>	
Department of Science and Technology	0.01
Food and Nutrition Research Institute	0.01
National Irrigation Administration	0.44
<i>Republic of Palau</i>	
National Treasury	0.01
<i>Singapore</i>	
HQ Singapore Civil Service Force	0.01
Ministry of Defense	0.01
<i>Sri Lanka</i>	
Agricultural Research Project Office	0.01
Central Bank of Sri Lanka	0.10
Integrated Rural Development Program	0.02
Irrigation Dept.	0.16
Ministry of Education and Higher Education	0.23
Ministry of Fisheries and Aquatic	
Resources Development	0.02
National Board of Revenue	0.02
National Irrigation Rehabilitation Project	0.02
Office of the Conservation of Forests	0.03
Rangpur Dinajpur Research Service	0.02
<i>Thailand</i>	
Airports Authority of Thailand	1.73
Bangkok Metropolitan Administration	0.04
Bank of Agriculture and Agricultural	
Cooperatives	0.03
Bank of Thailand	0.05
Chulalongkorn University	0.05
Communications Authority of Thailand	0.79
Department of Mineral Resources	0.19
Department of Technical and	
Economic Cooperation	0.02
Electricity Generating Authority	
of Thailand	0.72
Expressway Rapid Transit Authority of	
Thailand	0.04

IPST	0.05	Infinity Services Co. Ltd.	0.02	Netherlands Devt. Organization-Bhutan	0.02
Mahidol University	0.07	International Blaster Co., Ltd.	0.03	Phil-German Energy Center	0.01
Metropolitan Electricity Authority	0.03	International Rubber Parts Co. Ltd.	0.01	Ford Foundation	0.01
Metropolitan Waterworks Authority	0.41	Jabatan Petronium Sarawak	0.02	German Foundation for International Development	0.07
Ministry of Interior	0.08	Japan Engineering Consultants Co. Ltd.	0.05	Konrad Adenauer Foundation	0.03
Ministry of Science, Technology and Environment	0.01	Jasmin Telecom. System Co., Ltd.	0.03	Nishihara Foundation, Japan	0.07
Ministry of University Affairs	0.21	Joint Venture BBKS	0.16	Paris Chamber of Commerce and Industry	0.11
Naresuan University	0.04	Korean Internet	0.13	Red Barna/South Asia	0.01
National Housing Authority	0.02	L&M Systems (Thailand) Co. Ltd.	0.01	Sumitomo Foundation, Japan Inc.	0.08
National Science and Technology Development Agency	0.01	LVD Co. Ltd.	0.02	Thai Tapioca Development Institute	0.27
NECTEC	0.03	Marine Research Assessment Group	0.02	Wat Yannasangwararam	0.26
Office of Environmental Policy and Planning	0.14	Meada Corp., Japan	0.03	World Council of Churches	0.04
Petroleum Authority of Thailand	0.23	Merck Ltd.	0.01	World Vision of Bangladesh	0.01
Rajamangala Institute of Technology	0.11	Nam Theun II (EDF), Laos	0.20	World Vision International	0.02
Royal Development Project Board	0.07	Narai Technology Co. Ltd.	0.02	Sir William Halcrow & Partners	0.02
Royal Forestry Department	0.04	National Institute for Fashion Technology	0.02	Dr. Somsak Leeswadtrakul	3.18
Royal Thai Air Force	0.05	National Petrochemical Plc. Co. Ltd.	0.02	Mr. James P. Warburg	0.02
Royal Thai Navy	0.16	NEP Realty and Industry Plc. Co. Ltd.	0.01	Prof. Hiroyoshi Shi-Igai	0.01
Securities and Exchange Commission	0.06	Nokia Telecommunications Finland	0.16	Dr. Niyom Deeswasmongkol	0.01
Telephone Organization of Thailand	0.59	Nokia Telecommunications (Thailand) Co. Ltd.	0.05	Others	0.18
Tourism Authority of Thailand	0.03	Norton Networks Co. Ltd.	0.03		
Ubon Ratchatani University	0.03	Okuminisches Studien Werk E.V.	0.24		
<i>United Kingdom</i>		Overseas Construction Association of Japan Inc.	0.01	<i>Sub-Total</i>	8.73
UCLES	0.88	P. P. Center Co. Ltd.	0.06	TOTAL	100.00
University of Wales	0.11	P. T. Waskita Karya	0.01		
<i>United States of America</i>		Polyfelt Geosynthetics (Thailand) Ltd.	0.01		
University of Michigan	0.18	Profound Utrecht - Netherlands	0.02	The following donors also provided support:	
University of Minnesota	0.03	Quality Training (Thailand) Co. Ltd.	0.01	South Pacific Commission	
<i>Vietnam</i>		Remote Sensing Application Consultants, UK	0.06	Environmental Protection Dept., India	
Integrated Research Mapping Center	0.01	Royal Nepal Airlines	0.02	Eastern Indonesia Univ. Development Project	
National Institute for Agricultural Planning	0.02	Shell Co. of Thailand Ltd.	0.11	Hokkaido University	
		Siam Cement Co. Ltd.	0.12	Netherlands-Eindhoven Univ. of Technology	
<i>Sub-total</i>	14.46	Siam DHV Ltd.	0.09	Burapha University	
		Siam Navaloaha Laundry Co. Ltd.	0.01	Chiangmai University	
BUSINESS, FOUNDATIONS, PRIVATE INDIVIDUALS AND OTHERS		Sri Lanka Telecom	0.01	Dept. of Fisheries, Thailand	
ABT Associates Inc., USA	0.03	Tanakorn Products Co. Ltd.	0.02	Kesetsart University	
Aeronautical Radio of Thailand Ltd.	0.10	Technical Cooperation Facility	0.03	Prince of Songkla University	
Bangpakong Industrial Park 2 PLC. Co. Ltd.	0.04	Thunder and Associates Inc., USA	0.08	Rajabhat Institute Thepsatri	
Banpu Public Co. Ltd.	0.01	Ubol Sahatam Transport Co. Ltd.	0.07	Thammasat University	
BCEOM	0.03	United Comm.	0.03	Agro Enterprise Center, Nepal	
B. P. Exploration Operating Co. Ltd.	0.01	Wat Pra Prathom Chedi	0.03	Asia Foundation	
Carl. Bro International A/S	0.28	Winrock International	0.28	Cenit Siam Tech. Co., Ltd.	
Chemonics International, USA	0.11	Works Consultancy Service Ltd.	0.07	Direksi P.T. (Persero) Petabuhan	
Christiani and Nielsen (Thai) Plc. Co. Ltd.	0.01	World Environment Center, Inc.	0.01	Eastern Starch(1987) Co., Ltd.	
CIRAD, France	0.07			Freyssinet Phils., Inc.	
Cogeneration Co. Ltd.	0.01	AIT Foundation Inc.	0.07	Hewlett Packard (Thailand) Co., Ltd.	
CP Feed Mill PLC. Co. Ltd.	0.03	ASEAN Institute of Forest Management	0.15	Hydro Flap Co., Ltd.	
Development Alternative Inc.	0.03	Asian Society for Environmental Protection	0.03	Hyundai Engineering Construction Co. Ltd.	
Diakonisches Werk Der Ekd	0.01	Assumption University	0.02	IGS Co., Ltd.	
ERABA Corp., Japan	0.05	Bydale Foundation, USA	0.03	Int'l. Engineering PLC Co. Ltd.	
Elec and Eltex (Thailand) Ltd.	0.01	Catholic Relief Service - Cambodia	0.01	Italian-Thai Development PLC. Co. Ltd.	
Geotechnic Thailand Ltd.	0.02	Care - Bangladesh	0.08	Nippon Koei Co., Ltd.	
Ghamot Co., Ghana	0.02	Chulabhorn Research Institute	0.04	Passavant Werks A.G.-Germany	
Ghana Cotton Co. Ltd.	0.02	Concern Worldwide	0.01	Southeast Asia Tech. Co.Ltd.	
IACR-ROTHAMSTED	0.05	Corporate Network for Disaster Response	0.08	Thai Carbon Black PLC. Co., Ltd.	
		Halvetas, Bhutan	0.11	Thai Cogeneration Co., Ltd.	
		Harvard University	0.06	Thai Prasit Starch Co., Ltd.	
		Int'l. Fed. Library Association	0.02	The Value Sytems Co., Ltd.	
		Int'l. Fed. Red Cross and Red Crescent Society	0.12	Trade Contech Co., Ltd.	
		Japan-Indonesia Sci. & Tech Forum	0.07	Vector Engineering Inc.	
		Nepal Red Cross Society	0.01	Oxfam Cambodia	
				Wat Phrathammakai	

FINANCIAL STATEMENTS AND AUDITORS' REPORT

TO THE BOARD OF TRUSTEES OF ASIAN INSTITUTE OF TECHNOLOGY

We have examined the balance sheet of the Asian Institute of Technology as at June 30, 1996, the statement of revenues and expenditures of unrestricted current fund and restricted general fund and the related statement of changes in fund balance for the year then ended. Our examination was 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.

The comparative financial statements of the Asian Institute of Technology for the year ended June 30, 1995, was audited by another auditor whose report dated September 21, 1995 expressed an unqualified opinion.

In our opinion, the financial statements referred to above present fairly the financial position of the Asian Institute of Technology as at June 30, 1996, the statement of revenues and expenditures of unrestricted current fund and restricted general fund, and the related statement of changes in fund balance for the year then ended, in conformity with generally accepted accounting principles appropriate for a non-profit organization as set out in Note 1 to the financial statements, applied on a basis consistent with that of the preceding year.



Somboon Supasiripinyo
Certified Public Accountant
Peat Marwick Suthee Limited
Bangkok, November 27, 1996

NOTES TO FINANCIAL STATEMENTS JUNE 30, 1996 AND 1995

NOTE 1 BASIS OF PRESENTATION FINANCIAL STATEMENTS

■ 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 the 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.

NOTE 2
SUMMARY OF SIGNIFICANT
ACCOUNTING POLICIES

■ **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 recognized 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.

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

■ **INVENTORIES**

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

■ **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.

■ **FOREIGN CURRENCIES**

Exchange rates adopted:

Foreign currency transactions during the year -
 at the rates ruling on transaction dates.

Assets and liabilities in foreign currency outstanding on the balance sheet date -
 at the rates ruling on the balance sheet date.

Exchange gains and losses are included in determining income.

NOTE 3
INVESTMENTS

Investments as at June 30, consisted of :

	1996 BAHT	1995 BAHT
Time deposits with banks	198,072,961	177,578,841
Deposits with finance companies	195,180,130	283,290,877
Debenture	12,500,000	2,500,000
Warrant	4,040,000	1,000,000
Total	409,793,091	464,369,718

The investments of each fund as at June 30, are as follows :

	1996 BAHT	1995 BAHT
Unrestricted current fund	8,236,898	21,343,805
Restricted fund		
General	86,761,170	69,238,890
Endowment	66,826,137	65,175,013
General reserve	150,838,788	131,432,906
	304,426,095	265,846,809
Capital fund		
Liquid assets	2,255,162	75,794,439
Repairs and Maintenance reserve	1,729,351	1,203,302
	3,984,513	76,997,741
Sponsored program fund	33,410,049	31,015,751
Agency fund	59,735,536	69,165,612
Total	409,793,091	464,369,718

Time deposits with banks amounting to Baht 33.45 million (1995: Baht 4.4 million) of the restricted general reserve fund has been pledged with a bank as a collateral against outstanding letter of guarantee issued by the bank (see Note 10).

RESOURCES AND ADMINISTRATION

NOTE 4 ADVANCE DUTIES AND TAXES

These represent advance duties and tax 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 July 16, 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 June 30, are as follows :

	1996 BAHT	1995 BAHT
Employees personal income tax	24,673,733	9,533,884
Import and tax duty		
- Automobile	1,299,895	526,249
- Wine and spirits	230,094	174,082
	<u>26,203,722</u>	<u>10,234,215</u>

NOTE 5 FIXED ASSETS

Fixed assets as at June 30, are as follows :

	1996 Baht	1995 Baht
Campus development	32,930,352	24,768,452
Buildings	744,245,706	715,466,242
Furniture and equipment	756,627,913	742,081,710
Library acquisitions	107,347,930	98,365,928
Construction in progress	41,730,627	9,027,027
	<u>1,682,882,528</u>	<u>1,589,709,359</u>

Depreciation for the year amounting to Baht 74,690,016 (1995: Baht 75,494,006) has not been recorded in accordance with the fund accounting concept.

NOTE 6 CONTRIBUTIONS IN KIND

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 recognized as revenues and expenditures in the restricted general fund.

NOTE 7 FUND BALANCES

Fund balances as at June 30, are as follows :

	1996 Baht	1995 Baht
Restricted fund		
General	56,496,379	18,769,362
Endowment	67,101,783	65,230,319
General reserve	250,434,269	230,847,687
	<u>374,032,431</u>	<u>314,847,368</u>
Capital fund		
Fixed assets	1,682,882,528	1,589,709,359
Liquid assets -		
Unallocated	23,225,140	16,398,979
Liquid assets-		
Allocated	(15,014,433)	59,718,231
Repairs and		
maintenance reserve	1,729,350	1,203,302
	<u>1,692,822,585</u>	<u>1,667,029,871</u>

NOTE 8 AIT INSURED SAVINGS FUND

The Institute and its staff have jointly set up an insured savings fund scheme. The fund is contributed by staff and the Institute at the rate of 5% and 10% of basic salary, respectively. This fund is managed by Aon Consulting (Thailand) Ltd. Withdrawal and refund of the contributions and the related earnings by staff have to comply with the rules of the Insured Savings Fund.

NOTE 9 CAPITAL COMMITMENTS

As at June 30, 1996, the Institute had capital commitments in respect of building construction amounting to approximately Baht 6.22 million (1995: Baht 23.10 million).

NOTE 10 BANK GUARANTEES

As at June 30, 1996, there were outstanding bank guarantees of approximately Baht 33.45 million (1995: Baht 4.4 million) issued by a bank on behalf of the Institute in respect of certain performance bonds as required in the normal course of activities of the Institute.

ASIAN INSTITUTE OF TECHNOLOGY
BALANCE SHEETS
AS AT JUNE 30, 1996 AND 1995

	Unrestricted Current Fund		Restricted Fund		Capital Fund		Sponsored Program Fund		Agency Fund		Total	
	1996 Baht	1995 Baht	1996 Baht	1995 Baht	1996 Baht	1995 Baht	1996 Baht	1995 Baht	1996 Baht	1995 Baht	1996 Baht	1995 Baht
ASSETS												
Cash at banks	2,781,441	6,151,996	72,522,265	52,542,621	10,616,236	2,470,472	19,393,278	44,061,344	55,589,853	53,933,962	160,903,073	159,160,395
Investments (Note 3)	8,236,898	21,343,805	304,426,095	265,846,809	3,984,513	76,997,741	33,410,049	31,015,751	59,735,536	69,165,612	409,793,091	464,369,718
Advance duties and taxes (No 4)	26,203,722	10,234,215									26,203,722	10,234,215
Accounts receivable and accrued income	5,073,738	3,414,503	5,867,597	4,025,598	714,813	388,940	4,534,446	3,640,621	676,583	1,164,833	16,867,177	12,634,695
Deposits	910,622	884,843	63,862	63,561							974,484	948,404
Inventories			671,212	797,167							671,212	797,167
Due from other funds			98,000,000	98,000,000							98,000,000	98,000,000
Fixed assets (Note 5)					1,682,882,528	1,589,709,359					1,682,882,528	1,589,709,359
Total Assets	43,206,421	42,029,362	481,551,031	421,275,756	1,698,198,090	1,669,566,512	57,337,773	78,717,916	116,001,972	124,264,407	2,396,295,287	2,335,853,853
LIABILITIES AND FUND BALANCES												
LIABILITIES												
Accounts payable and accrued expenses	3,646,861	2,558,125	7,963,920	6,943,958	5,375,505	2,536,641	631,948	304,357	1,280,531	1,184,573	18,908,765	13,527,554
Deposits Due to other funds	1,034,845	956,522	1,554,680	1,484,530							2,589,525	2,441,052
			98,000,000	98,000,000							98,000,000	98,000,000
Total Liabilities	4,681,706	3,514,647	107,518,600	106,428,388	5,375,505	2,536,641	631,948	304,357	1,280,531	1,184,573	119,498,290	113,968,606
FUND BALANCES	38,514,715	38,514,715	374,032,431	314,847,368	1,692,822,585	1,667,029,871	56,705,825	78,413,559	114,721,441	123,079,834	2,276,796,997	2,221,885,347
(Note 7) Total Liabilities and Fund Balances	43,206,421	42,029,362	481,551,031	421,275,756	1,698,198,090	1,669,566,512	57,337,773	78,717,916	116,001,972	124,264,407	2,396,295,287	2,335,853,853

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 JUNE 30, 1996 AND 1995

	Unrestricted Current Fund		Restricted Fund - General		Total	
	1996 Baht	1995 Baht	1996 Baht	1995 Baht	1996 Baht	1995 Baht
REVENUES :						
Tuition and fees:						
Academic unit	223,537,220	194,404,288			223,537,220	194,404,288
Computer center	6,836,590	6,722,868			6,836,590	6,722,868
	230,373,810	201,127,156			230,373,810	201,127,156
Gifts and contributions:						
Cash	19,377,212	15,091,600	147,911,858	140,887,871	167,289,070	155,979,471
In-kind			78,795,361	87,837,873	78,795,361	87,837,873
	19,377,212	15,091,600	226,707,219	228,725,744	246,084,431	243,817,344
Grants and contracts	22,492,619	24,130,743	15,610,694	11,217,017	38,103,313	35,347,760
Sales and services:						
Educational activities		22,816	63,534,754	46,865,275	63,534,754	46,865,275
Others	37,736		1,856,059	1,486,272	1,893,795	1,509,088
	37,736	22,816	65,390,813	48,351,547	65,428,549	48,374,363
Income from investments	21,161,314	19,461,276			21,161,314	19,461,276
Auxiliary services			121,522,508	104,747,475	121,522,508	104,747,475
Recovery of indirect costs	23,831,990	28,824,239			23,831,990	28,824,239
AIT sponsored programs			6,511,972	4,745,974	6,511,972	4,745,974
Physical Plant support			28,666,475	27,999,152	28,666,475	27,999,152
Exchange stabilization			4,036,304	3,688,775	4,036,304	3,688,775
Miscellaneous			16,287,761	7,624,325	16,287,761	7,624,325
Total Revenues	317,274,681	288,657,830	484,733,746	437,100,009	802,008,427	725,757,839
EXPENDITURES:						
Salaries and associated costs:						
Cash	221,344,354	200,987,747	7,019,973	6,675,179	228,364,327	207,662,926
In-kind(Note 6)			78,795,361	87,837,873	78,795,361	87,837,873
	221,344,354	200,987,747	85,815,334	94,513,052	307,159,688	295,500,799
Academic units operating costs	29,373,980	26,791,657	150,881,015	142,883,722	180,254,995	169,675,379
Student related costs	1,476,104	1,161,745	5,601,770	4,564,348	7,077,874	5,726,093
Administrative support costs	4,833,818	4,215,543	117,084	269,807	4,950,902	4,485,350
Capital purchases	13,372,787	14,967,763	(58,816)	(254,410)	13,313,971	14,713,353
Campus wide services	45,821,542	38,126,771			45,821,542	38,126,771
Physical Plant support costs			43,074,459	47,239,754	43,074,459	47,239,754
AIT sponsored programs			15,418,175	14,837,728	15,418,175	14,837,728
Auxiliary services costs			84,609,587	85,399,960	84,609,587	85,399,960
Exchange stabilization			5,441,749	2,144,228	5,441,749	2,144,228
Other costs			56,106,372	47,802,402	56,106,372	47,802,402
Total Expenditures	316,222,585	286,251,226	447,006,729	439,400,591	763,228,314	725,651,817
Excess of revenues over expenditures (Expenditures over revenues)	1,052,096	2,406,604	37,727,017	(2,300,582)	38,779,113	106,022

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

ASIAN INSTITUTE OF TECHNOLOGY
STATEMENT OF CHANGES IN FUND BALANCES
FOR THE YEAR ENDED JUNE 30, 1996 (WITH COMPARATIVE TOTALS FOR 1995)

	RESTRICTED FUND		CAPITAL FUND										
	Unrestricted Current Fund	General	Endowment	General Reserve	Fixed Assets	Liquid Assets Unallocated	Liquid Assets Allocated	Repair & Maintenance Reserve	Sponsored Program Fund	Agency Fund	Total 1996	Total 1995	
	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	
ASSETS													
Balances July 1, 1995 (Note 7)	38,514,715	18,769,362	65,230,319	230,847,687	1,589,709,359	16,398,979	59,718,231	1,203,302	78,413,559	123,079,834	2,221,885,347	2,035,151,265	
Adjustments:													
Disposal of assets													
Additions:					(67,816,877)						(67,816,877)	(946,750)	
Excess of revenues over expenditures/expenditures over revenues		37,727,017											
Investment income	1,052,096										6,712,986	81,602,678	
Government grants and appropriations		1,521,464	19,060,534						(21,707,794)	(8,358,393)	20,581,998	19,316,240	
Gain(loss) on ROE* contributions		350,000				17,432,117					17,432,117	25,447,530	
Miscellaneous income and contributions-in-kind					7,822,766	45,996,752					350,000	(149,788)	
Due from other fund					31,334,185						53,819,518	73,595,671	
											31,334,185	8,504,356	
												10,000,000	
Total Assets	39,566,811	56,496,379	67,101,783	249,908,221	1,521,892,382	24,221,745	154,481,285	1,203,302	56,705,825	114,721,441	2,286,299,174	2,252,321,202	
Deductions:													
Inter-fund transfer from (to)								526,048			1,052,096	2,406,604	
- Restricted Current Fund											(526,048)	(1,203,302)	
- General Reserve (526,048)													
- Liquid Assets Capital Fund													
- Allocated												(18,070,411)	
- Repairs & Maintenance Reserve (526,048)											(526,048)	(1,203,302)	
Expenditures for plant facilities					160,990,146		(38,764,680)				122,225,466	50,580,293	
- Cash							(31,334,185)				(31,334,185)	(8,504,356)	
- Kind													
Other cost						(996,605)	(99,396,853)				(100,393,458)	(44,641,381)	
- General												(10,000,000)	
- Due to other fund													
	(1,052,096)			526,048	160,990,146	(996,605)	(169,495,718)	526,048			(9,502,177)	(30,635,855)	
Balances as of June 30, 1996 (Note 7)	38,514,715	56,496,379	67,101,783	250,434,269	1,662,882,528	23,225,140	(15,014,433)	1,729,350	56,705,825	114,721,441	2,276,796,997	2,221,885,347	

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

*ROE - Rate of Exchange

COMMUNITY

CAMPUS EVENTS

Celebrating His Majesty King Bhumibol's Golden Jubilee



The AIT Community joined the Thai nation in honoring the Golden Jubilee of His Majesty King Bhumibol Adulyadej. A special Golden Jubilee Book, conveying greetings from the AIT community, was presented to the Bureau of the Royal Household.

In observance of His Majesty's Golden Jubilee, the AIT Foundation (USA) created a special fund to benefit AIT Doctoral graduates whose academic pursuits are of special interest to His Majesty.

The AIT Foundation (USA) King Bhumibol Prize Fund is supported by an initial contribution of US\$20,000 from the Foundation's Directors. The amount was transferred to AIT in October 1996. The Fund's interest earnings will be used to support deserving award recipients.

H. M. King Bhumibol, the longest-reigning monarch in Thai history, guided Thailand's development as a newly established democracy, earning the respect, love and esteem of His loyal subjects.

■ GUEST LECTURES

Fourth Milton Bender Lecture



Prof. Imberger

The annual Milton Bender Lecture honors the first AIT President, Dr. Milton E. Bender, and is given by a distinguished university professor who is selected on a global basis. Prof. Jorg Imberger, an eminent environmentalist from the University of Perth, presented the Fourth Milton Bender Lecture, "Environmental Technology and Science", on 21 March. The guest lecturer in 1997 is Prof. Douglas Wright, a renowned expert in system designs engineering and former President of the University of Waterloo, Canada (1981-1993).

21st Century Megatrends



Mr. Shih

Global competition and cooperation and borderless development are distinct megatrends for the 21st century, said Mr. Stan Shih, Chairman & CEO of the Acer Group, when he lectured at AIT on 13 May. Asia will grow even bigger as we approach the 21st century, he predicted, attributing the region's increasing competitiveness to four main factors: its emergence as a major international manufacturing base coupled with its continued economic growth and expansion, a growing demand for goods in Asian markets, and a strong purchasing power worldwide.

■ WELCOMING THE DOWNERS

In northern Thailand, *rod num dum hua* or the pouring of lustral water on the hands of honored guests, is a well-loved tradition of welcome. At a ceremony on 11 October, AITians welcomed Prof. and Mrs. Roger G. H. Downer with a *rod num dum hua* rite. The program also featured classical performance by dancers from the Fine Arts Department of Thailand. Prof. Pisidhi Karasudhi, AIT Vice President for Development and Chairperson of the organizing committee for the Thai welcome ceremony, led the AIT community in extending warm wishes to the Downers.

Prof. Downer and his wife, Jean, together with their daughter, Tara, were introduced to the AIT family and distinguished guests at a reception held on 31 July at the Regent Hotel in Bangkok. Sharing the honor with the Downers was outgoing AIT President, Dr. Alastair North, who was farewelled at the same event.

Dr. Thanat Khoman, AIT Chairperson Emeritus, led the AIT Board in hosting the celebration, which was attended by senior Thai Government officials, representatives from international organizations, members of the Diplomatic Corps, members of the AIT community, and other distinguished guests.

In a group photo with Dr. Thanat Khoman are the new AIT President, Prof. Roger G. H. Downer, and his predecessor, Dr. Alastair North, members of the Diplomatic Corps and the AIT Board of Trustees, together with Mrs. Jean Downer and Mrs. Sasithorn Karasudhi.



■ WITH THANKS AND ALL GOOD WISHES

At a campus farewell held on 26 July, the AIT community honored the outgoing President by unveiling the Alastair M. North Lecture Theatre. The dedication provided a fitting recognition of Dr. North's achievements during his 13-year term as President.



Applauding Dr. North for his achievements are senior AIT officials, from left: Mr. Edward Mayer, Bursar; Prof. Pisidhi Karasudhi, Vice President for Development; Prof. Karl E. Weber, Vice President for Academic Affairs; Prof. Prinya Nutalaya, Dean of the School of Civil Engineering; and Prof. Chongrak Polprasert, Dean of the School of Environment, Resources and Development.



Dr. Ricardo P. Pama, former Vice President for Academic Affairs, and his wife, Minda, said goodbye to colleagues and friends from their 26-year association with AIT and the SEATO Graduate School of Engineering, at a party held at the Sukothai Hotel on 21 June and at a staff luncheon on 27 June.

The Pamas are now based in Manila. Dr. Pama has joined Schema Konsult International as President, while Minda is a faculty member of Brent International School.

STUDENT AND ALUMNI RELATIONS

■ ENRICHMENT ACTIVITIES

AIT instills in the students a desire to learn what lies beyond the confines of the classroom. Opportunities to interact with people from different nations and cultures enable all members of the AIT community to enjoy an enriching cultural experience and to build a network of international friends and contacts.

The AIT Student Union (SU) organizes a broad range of extra-curricular programs and support services to facilitate the students' adjustment to campus life and help them develop their team spirit and leadership potential.

■ STUDENT UNION ELECTION

The Student Union elected Mr. Preamsak Wanuchsoontorn as President, succeeding Mr. Mazhar Ul Islam. Mr. Preamsak and his team will serve in the January 1997 and May 1997 school terms.

Serving on the board with Mr. Preamsak are I Nyoman Pujawan (General Secretary), Chompoonut Chaiyaraksa (Treasurer), and officers in charge of specific sectors and activities, as follows: Sunimal Weerasooriya (External Af-

fairs), Suresh B. Ranjit (Culture and Debate), Sumet Sompradeekul (Snack Bar), Moe Kyaw Aung (Film and Video), Raghunath B. Shivappa (Academic Affairs), Kanchana Nakhapakorn (Trip and

Transport), Golam Monawar Kamal (Photography), Huang Neng Geng (Sports), Mohammad Haneef Khan (Literary Activities and Publications), Zahed Iqbal (MCEC), Shabbir H. Ghewala (Housing), and Samir Kumar Khanal (Environment).



Mr. Preamsak



At annual cultural shows held on campus, students introduce the indigenous and contemporary art, music and dance of their respective countries.

■ AITAA MARKS SILVER JUBILEE

The AIT Alumni Association (AITAA) celebrated its silver jubilee at the 25th Governing Board Meeting, which was hosted by the AITAA-Pakistan Chapter on 25-26 April in Islamabad. The annual meeting was co-hosted by the National University of Sciences and Technology of Pakistan and was attended by delegations from ten national chapters, as follows: Bangladesh, Chinese Taipei, Japan, the Republic of Korea, Malaysia, Myanmar, Nepal, Pakistan, Philippines, and Thailand. It was the first-ever AITAA meeting attended by alumni from Bangladesh and Myanmar.

Mr. Shaukat Khan (AFE '79), President of AITAA-Pakistan Chapter, welcomed the delegates to the GBM, a highlight of which was the unveiling of the AITAA Strategic Plan.

The 25th GBM also provided an appropriate occasion to say thank you

and goodbye to former AIT President, Dr. Alastair North, and Vice President for Academic Affairs, Dr. Ricardo P. Pama.

Major decisions reached at the GBM included approval of the AITAA Strategic Plan and its publication by July 1996, endorsement of the AIT/AITAA MoU on marketing. The Board set a target of \$US 1.5 million to be solicited for AIT during the period 1996-97.

The Board approved use of the Internet for AITAA communications. Contact details for individual alumni will be made available through the Internet.

Recommendations for the AIT Alumni Tracer Study were presented and appreciation of the Institute's support for this regular activity was expressed. The study is conducted once every three years.

The Board requested the AITAA President to take up with the Board Chairperson and Institute President a proposed advisory role for AITAA Chapters on the selection and appointment of AIT Trustees.

The venue for future AITAA GBMs will be Malaysia in 1997, the Philippines in 1998, AIT in 1999, and Australia in 2000.

CAMPUS DEVELOPMENT

New Cafeteria

The new cafeteria, which is expected to be ready by April 1997, is being constructed at a cost of 13,144,731 Baht, obtained from a Royal Thai Government grant and the AIT Housing Reserve.

Car Parks

Additional parking for 40 cars (between ST-9 and P Dorm) and for 20 cars (in the ET area), expected to be ready for use by February 1997, is being constructed at a cost of 2,350,000 Baht, obtained from the AIT Housing Reserve and the Central Fund.

Bund Improvement

Earthwork for erosion control is being carried out using a grant from the Royal Thai Government. AIT will fund the development of the area fronting Phaholyothin Highway and the construction of a road on the westside of the campus.

Proposed Academic Buildings

A construction budget of 34 million Baht has been allocated for the proposed School of Management Building, which will be sited on the northside of the campus.

Construction of the Pulp and Paper Technology Building will be supported by Advance Agro Plc. The building will rise east of the Biotech Building. A groundbreaking ceremony is scheduled to take place in March 1997.



Opening ceremony for the 25th Governing Board Meeting of AITAA.

■ DIALOGUING WITH AITAA CHAPTERS

Dr. Primitivo C. Cal (CRD '70), Undersecretary of the Department of Transportation and Communications of the Philippines and President of AITAA-Philippines, led Filipino alumni in a series of meetings with AIT President, Prof. Roger G. H. Downer. Their discussions covered topics of mutual interest including the Philippine Government's plan to

establish a science and technology institute, marketing AIT's continuing education courses in pollution control, and creating a greater AIT presence in the Philippines.

Prof. Downer met some 30 Vietnamese alumni during a promotional trip to Hanoi in October.

ON-GOING SPONSORED AND CONTRACT RESEARCH

School of Advanced Technologies

CAD/CAM Application for the Design and Manufacture of Sheet Metal Parts with Numerically Controlled Machines

Investigator: J.R. Dufflou

Sponsor: LVD Co., Ltd.

Automatic CAPP for CNC Bending

Investigator: J.R. Dufflou

Sponsor: CIMLab

Equipment grant: Belgian Cooperation Ministry

NC-PC Machine: an Open Architecture CNC Machine

Investigator: E.L.J. Bohez

Sponsor: Belgian Govt.

RIT/Khon Kaen/Korat CAD-CNC Training

Investigator: E.L.J. Bohez

Sponsor: Belgian Govt.

Re-design for Manufacture and Assembly of Daysafe Security Drawer

Investigators: E.L.J. Bohez, J.R. Dufflou, N. Rumana, S. Taopanich

Sponsor: DaySafe Co.

Abrasive Waterjet Cutting of Pre-Formed Sheet Metal Parts with 3-Axis Control

Investigator: J.R. Dufflou

Sponsor: Siemens Ltd.

Equipment Grant: Belgian Cooperation Ministry

Development of an Intelligent System to Support Statistical Method Selection: Prototyping Phase

Investigator: V. Esichaikul

Sponsor: AIT Research Initiation Grant

School of Civil Engineering

Full Scale Test Embankments for PVD Tests at Second Bangkok Int'l Airport

Investigators: A.S. Balasubramaniam, D.T. Bergado, N. Phien-wej, S.A. Ashford

Sponsor: AAT, Thailand.

Lime/Cement Columns of Soft Bangkok Clay

Investigators: A.S. Balasubramaniam, D.T. Bergado; *Sponsor:* Bilfinger and Berger (Thai) Co., Ltd.

Monitoring and Evaluation of Vacuum Consolidation with PVD for Second Bangkok Int'l Airport

Investigator: D.T. Bergado

Sponsor: Geotechnics (Thailand) Co. Ltd.

Solid Waste Landfill Design in Thailand

Investigator: S.A. Ashford

Sponsor: AIT Research Initiation Grant

Amplification of Earthquake Ground Motions by Soft Bangkok Clay

Investigator: S.A. Ashford

Sponsor: Chulalongkorn Univ.

Geotechnical Investigation on Foundation Materials of Nam Theun 2 Hydroelectric Project, Lao PDR

Investigator: N. Phien-wej; *Sponsor:* Nam Theun 2 Project Development Group

Buddha Image Sculpturing on Khao Chee Chan Cliff Face, Wat Yannasangwararam, Sattahip, Chonburi

Investigators: P. Nutalaya, N. Phien-wej

Sponsor: Wat Yannasangwararam

Trial Mix Study for Deep Mixing Method Bangna-Bang Pakong Highway Project

Investigators: N. Phien-wej, D.T. Bergado

Sponsor: Ubon Sahatham Transport Co., Ltd.

Investigation and Design to Improve Flood Protection System of Thammasat University, Rangsit

Investigators: T. Tingsanchali, N. Phien-wej;

Sponsor: Ministry of Finance, Thailand.

Geotechnical Services for Engineering Construction Supervision of Underground Powerhouse Caverns and Associated Tunnels and Shafts, Lam Ta Khong Pumped Storage Project, Nakorn Ratchasima, Thailand

Investigator: N. Phien-wej

Sponsor: EPDC/EGAT

Investigation of Mechanical Properties of Typical Soils in Northeast Thailand for Construction of Irrigation Facilities

Investigator: Y. Kohgo; *Sponsor:* Japan Int'l Research Center for Agricultural Sciences

Integrated Decision Support System for Groundwater Monitoring and Management

Investigators: A. D. Gupta, R. Loof, P. R. Onta

Sponsor: GTZ GmbH

Chao Phraya Flood Management Review

Investigators: S. Vongvisessomjai, A. MacDonald (Senior Hydrologist, DHI), J. E. Cowley (Senior Flood Control Engineer, ACRES); *Sponsor:* World Bank

Flood Protection Master Plan for Thailand

Investigators: S. Vongvisessomjai, P. Nutalaya, A. D. Gupta, R. Loof, N. Phien-wej, S. Weesakul, M. Nachabe

Sponsor: Public Works Dept., Thailand

Wave Measurement for Fishery Complex Study on Andaman Sea Coast; *Investigator:* S. Weesakul; *Sponsor:* Tetra Co. Ltd.

Detail Design of Rubble Mound Breakwater to Conserve Fossilized Shell Beds, Ban Laem Pho, Krabi

Investigators: S. Vongvisessomjai, P. Nutalaya, N. Phien-wej, S. Weesakul

Sponsor: Dept. of Mineral Resources, Thailand

Royal Initiative Projects on Water Resources Development for MWA

Team Leader: T. Tingsanchali

Sponsor: Metropolitan Waterworks Authority, Bangkok

Engineering, Environmental and Economic Study of Waste Materials in Highway Construction for Southeastern Asia

Investigator: J. S. Chen

Sponsor: Sustainable Development Project

Investigation of Mechanical Properties of Typical Soils in Northeast Thailand for Construction of Irrigation Facilities

Investigator: Y. Kohgo; *Sponsor:* Japan Int'l Research Center for Agricultural Sciences

Integrated Decision Support System for Groundwater Monitoring and Management

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Flood Protection Master Plan for Thailand

Investigators: S. Vongvisessomjai, P. Nutalaya, A. D. Gupta, R. Loof, N. Phien-wej, S. Weesakul, M. Nachabe

Transportation Project Evaluation*Investigator:* H. Morisugi; *Sponsor:* JICA**Bangkok Subway Project Seminar***Organizers:* H. Morisugi, Y. Tanaboriboon
Sponsor: JICA**Reliability-Based Design of Water Supply Systems***Investigator:* O. Fujiwara; *Sponsor:* JICA**Size Effect Prediction of Concrete Structures***Investigator:* J. Niwa; *Sponsor:* JICA**Wind Tunnel Tests of Pattaya Park Tower***Investigators:* P. Warnitchai, W. Kanok-Nukulchai, K. Vajarasathira
Sponsor: Pattaya Park Beach Hotel Co., Ltd.**Suppression of Wind-Induced Oscillations of a Tall Tower by Utilizing a Large-Size Tuned Liquid Damper***Investigators:* P. Warnitchai, W. Kanok-Nukulchai
Sponsor: Pattaya Park Beach Hotel Co., Ltd.**Numerical Analysis on Dynamic Properties and Behaviour of Transmission Lines under Wind Loadings***Investigator:* P. Warnitchai
Sponsor: Central Research Inst. of Electric Power Industry, Japan**Construction Management in Asia***Investigator:* K. Baba; *Sponsor:* JICA**Software Development for the Design of 3D Sandwich Panels and for Background Research***Investigators:* W. Kanok-Nukulchai, A. Wijeywickrema, N. Anwar; *Sponsor:* Nichada Thani Group of Companies, Bangkok**Computer-Assisted Design of Steel Houses and Low-Rise Buildings***Investigator:* W. Kanok-Nukulchai
Sponsor: Siam Yamato Steel Co. Ltd.**Study on Integrity and Stability for Renovation of Ancient Structures in Ayutthaya***Investigators:* W. Kanok-Nukulchai, N. Phien-wej
Sponsor: Department of Fine Arts, Thailand**School of Environment, Resources and Development****Rural Development through Aquaculture in Indochina;** *Investigators:* H. Demaine, R. Gregory, N. Innes-Taylor, P. Edwards, D. Little, L. T. Luu (Research Inst. for Aquaculture No. 1, Hanoi), L. T. Hung, N. V. Tu (Univ. of Agriculture and Forestry, Ho Chi Minh City); *Sponsor:* SIDA**Support to AIT Aquaculture Outreach Program in Indochina and Northeast Thailand;** *Investigators:* H. Demaine, M. Korn, H.B. Nielsen, P. Edwards; *Sponsor:* Danida**Support for Regional Aquaculture Development;** *Investigators:* P. Edwards, H. Demaine, J. Hambrey, D. Little; *Sponsor:* ODA**Pond Dynamics Collaborative Research Support Program (Phase II);** *Investigators:* C. K. Lin, P. Edwards; *Sponsor:* USAID**Assessment of Bio-chemical Monitoring System for Coastal Contamination;** *Investigators:* C.K. Lin, L. Reutergardh; *Sponsor:* SIDA**Comparative Study of Transition to Alternative Agriculture Practices in Thailand and Japan;** *Investigator:* S. Setboonsarng
Sponsor: Sumitomo Foundation**Comparison of Nutritional Energetics of Two Nile Tilapia Strains: an Experimental GIFT Strain and the Widely Farmed Thai Chitlada Strain**
Investigators: A. Yakupitiyage, P. Edwards;
Sponsors: ICLARM/ODA**Water Weed Harvester***Investigator:* D. Gee-Clough; *Sponsor:* AIT**Soil-tine Interactions in Loam Soil***Investigators:* V. M. Salokhe, J. T. Makanga
Sponsor: JICA**Design and Development of a Tractor-Mounted Pineapple Dressing Machine***Investigators:* V. M. Salokhe, C. Kaewprakaisaengkul
Sponsor: Siam Agro Industry Pineapple Public Co. Ltd., Thailand and other companies**Irradiation Heat Synergism for Semi-dried Meat;** *Investigator:*A. Noomhorm; *Sponsor:* IAEA, Vienna**Post Harvest Handling System for Selected Fruits and Vegetables in Thailand***Investigator:* A. Noomhorm
Sponsor: Ministry of Industry, Thailand**Experimentation of a Fluidized Bed Coffee Roaster***Investigator:* J. C. Vincent; *Sponsor:* CIRAD**Development of a New Starchmeter***Investigators:* S. S. Win, W. F. Stevens
Sponsor: Thai Tapioca Development Inst.**Industrial Systems for the Isolation of Chitin and Chitosan from Shrimp Waste;** *Investigators:* S. Chandrakrachang, W. F. Stevens**Application of Chitin and Chitosan Membranes for Wound Healing***Investigators:* R. Molloy, S. Chandrakrachang, W. F. Stevens; *Sponsor:* MTEC, Thailand**Bio-mass as Energy Source and Technical Option for Greenhouse Gas Emission Reduction;** *Investigators:* S.C. Bhattacharya, R.M. Shrestha, S. Kumar, P. Santibuppakul; *Sponsor:* SIDA**Asian Regional Post-Doctoral and Research Fellowship Program***Investigator:* S.C. Bhattacharya
Sponsors: SAREC, SIDA**Renewable Energy Technologies in Asia: A Regional Research and Dissemination Program;** *Investigators:* S.C. Bhattacharya, S. Kumar; *Sponsors:* SAREC, SIDA**Assessment of Energy Economics Situation in Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam;** *Investigator:* G.V. Dang; *Sponsor:* EC/DG17 (THERMIE)**Marketing Strategies and Actions to Open the Asian Market for European Technologies in the RES Field***Investigator:* G.V. Dang
Sponsor: EC/DG17 (THERMIE)**Advanced Education at AIT in the Context of Academic Cooperation between Europe and Asia***Investigator:* G.V. Dang
Sponsor: EC/DG17 (SYNERGY)

Strategies to Strengthen Regional Institutional Capabilities in Energy-Environment Policy Definition, Formulation and Networking; *Investigator:* G.V. Dang; *Sponsor:* EC/DG17 (SYNERGY)

Energy Policy Dialogue between Europe and Asia; *Investigator:* G.V. Dang; *Sponsor:* EC/DG17 (SYNERGY)

Solar Air Dryer for Value Added Food Product; *Investigator:* S. Kumar; *Sponsor:* AIT Research Initiation Grant

Status of Fruit and Vegetable Drying Using Solar Energy in Thailand; *Investigator:* S. Kumar, B. Mohanty; *Sponsor:* ADEME

Solar Thermal Energy for Sustainable Development in Rural Asia; *Investigator:* S. Kumar; *Sponsor:* Royal Netherlands Govt./AIT

Interfuel Substitution Analysis and Modelling in Asian Developing Countries; *Investigators:* T. Lefèvre, X. Chen, B. Baeurle, N.D. Dam; *Sponsor:* French Govt.-MAEF/AIT

Energy Saving Analysis and Modelling in Asian Developing Countries; *Investigators:* T. Lefèvre, X. Chen, B. Baeurle, N.D. Dam; *Sponsor:* French Govt.-MAEF/AIT

RAS/92/071: Program for Asian Cooperation on Energy and the Environment: (sub-activities: EEP1, 2,3, 5 and 6 of the Energy Environmental Planning Project); *Investigators:* T. Lefèvre, R. Pacudan, S.K. Acharya; *Sponsors:* UNDP/French Govt.-MAEF

Energy-Planning and Environmental Database; *Investigators:* T. Lefèvre, G.R. Timilsina, S.K. Acharya; *Sponsors:* French Govt.-MAEF/UNDP/ESCAP

ADB T.A. No.1628-PRC: Energy-cum-Electricity Demand and Supply Analysis; *Investigators:* T. Lefèvre, X. Chen, Y. Zhai; *Sponsor:* ADB (French Trust Fund)

Sectoral Energy Demand Forecast Model for African and Pacific Countries; *Investigators:* T. Lefèvre, S.K. Acharya; *Sponsors:* French Govt.- MAEF

Energy-Environment Modelling; *Investigators:* T. Lefèvre, S.K. Acharya; *Sponsors:* UNDP/ESCAP/French Govt.-MAEF

Sectoral Energy Demand Forecast Model: Energy Saving, Fuel Switching Potentials and Environmental Impact Assessment Study; *Investigators:* T. Lefèvre, X. Chen, N.H. Dung, N.D. Dam; *Sponsors:* French Govt.-MAEF/ADEME/AIT

MAL/93/001: Energy Policy Analysis and Planning to the Year 2020 - Energy Master Plan in Malaysia; *Investigators:* T. Lefèvre, X. Chen; *Sponsors:* UNDP/Malaysian Govt.

Wood Energy Today; *Investigators:* T. Lefèvre, G.R. Timilsina, J. Todoc; *Sponsor:* FAO (RWEDP, FOPW, FOND)

Macro-Economic and Financial Database; *Investigators:* T. Lefèvre, L. Schwab; *Sponsors:* French Govt. (MAEF/CFVG)

Power Sector Study: Investment Prospects and Business Opportunities - Vietnam, Philippines and Thailand; *Investigators:* T. Lefèvre, G.R. Timilsina, J. Todoc; *Sponsor:* French Govt. (MAEF/CFVG)

Market and Technical Study on Solar Water Heaters in Thailand; *Investigators:* T. Lefèvre, N.T. Kim; *Sponsors:* Thainox Steel Ltd./EEEC Co. Ltd.

GEF/UNDP/ADB T.A. No. 5592 REG: ALGAS Project: Least Cost Greenhouse Gas Abatement Strategy for Asia; *Investigators:* T. Lefèvre, R. Pacudan, S.K. Acharya; *Sponsors:* GEF/UNDP/ADB/ESCAP

Electricity Sector in the Philippines; *Investigators:* T. Lefèvre, R. Pacudan, J. Todoc; *Sponsors:* OECD/IEA

Assessment of Reduced Cycling Costs of Thermal Units due to DSM in Integrated Resource Planning; *Investigator:* A. S. Malik; *Sponsor:* AIT

Development of Environmentally Sound and Energy Efficient Industrial Technologies in Asia; *Investigators:* B. Mohanty, C. Visvanathan; *Sponsor:* SIDA

Computer Package for Cogeneration Using Steam Turbines; *Investigators:* B. Mohanty, A. N. Oo; *Sponsor:* ADEME

Scope of Commercialization of Energy Efficiency in Thailand; *Investigators:* B. Mohanty, M. Wachara; *Sponsor:* ADEME

Assessment of Energy Efficiency Options for Mitigating Emissions of Greenhouse Gases from the Electricity Sector; *Investigators:* R.M. Shrestha, S.C. Bhattacharya; *Sponsor:* SIDA

Development of State Estimation for Power Distribution Automation Using Artificial Neural Networks; *Investigator:* S.C. Srivastava; *Sponsor:* AIT

Methodology for Retrofitting Library Building for Energy Conservation, Phase II; *Investigator:* S. Chirarattananon; *Sponsor:* Energy Conservation Promotion Fund

Daylighting, Efficient Electric Lighting Integration and Related Envelope Improvement - Phase I: Station Investigation; *Investigators:* S. Chirarattananon, J. Kaewkiew (Silpakorn Univ.); *Sponsors:* ECP Fund, NEPO

Methodology for Energy Conservation for Existing Buildings; *Investigator:* S. Chirarattananon; *Sponsor:* DEDP (continuing activity of Energy Code Project)

Testing of Solar-Powered Vaccine Refrigerator by TATA BP Solar India; *Investigator:* G. Mink; *Sponsors:* EPI, WHO (New Delhi)

Testing of Vaccine Refrigerator by Norwast Refrigerator, Australia; *Investigator:* R. Islam; *Sponsors:* EPI, WHO

Improvement of Water Quality Management Techniques from the Viewpoint of Algae Bloom Control; *Investigator:* Y. Ishibashi; *Sponsor:* Environment Agency, Japan

Foresight and Control of Harmful Algae Pollution; *Investigator:* Y. Ishibashi; *Sponsor:* Science and Technology Agency, Japan

Optimum Water Supply System in Thailand
Investigator: T. Kamei; *Sponsor:* JICA

Waste Minimization and Energy Saving for Selected Industries; *Investigator:* S. Muttamara, C. Visvanathan; *Sponsor:* PTT

Environmental Awareness Raising on Handling and Treatment of Heavy Metal and Toxic Wastes (Phases I, II)
Investigator: C. Polprasert; *Sponsor:* SIDA

Septage Treatment in Constructed Wetlands in Attached-Growth Waste Stabilization Ponds
Investigator: C. Polprasert; *Sponsor:* EAWAG/SANDEC Swiss Federal Inst. for Environmental Science and Technology

Developing Environmental Sustainability through Solid Waste Management
Investigator: C. Visvanathan
Sponsor: Royal Netherlands Govt.

Development of Energy Efficient and Environmentally Sound Industrial Technologies in Asia
Investigators: C. Visvanathan, B. Mohanty; *Sponsor:* SAREC, SIDA

Financing the Advance Construction of Network Infrastructure in Urbanizing Areas: Focus on Beneficiary Finance Sources
Investigator: R.W. Archer; *Sponsor:* Metropolitan Research Trust, et al

Urban Land Pooling/Readjustment in Asia-Pacific Countries; *Investigator:* R.W. Archer; *Sponsor:* Metropolitan Research Trust, et al

Land, Housing and Urban Development in Thailand; *Investigator:* R.W. Archer
Sponsor: Metropolitan Research Trust, et al

SPRING Joint Research Program on Decentralized Regional Development in Thailand (7 sub-projects by faculty at Univ. of Dortmund, Germany, and AIT); *Coordinator and Investigator:* H.D. Kammeier; *Sponsor:* GTZ

Local Development Fund, Cambodia. Pilot Phase: implementation, monitoring and evaluation; Main Phase: formulation - project document completed; AIT-UNCDF cooperative agreement under consideration
Investigators: HSD Team
Sponsor: UNCDF (LDF Project, Cambodia)

Sustainable Rural Industrial Development in China; *Investigator:* B.W.E. Wickramanayake; *Sponsor:* Royal Netherlands Govt.

Housing Factory Workers in the Northern Corridor of the Bangkok Metropolitan Area; *Investigator:* Yap Kioe Sheng; *Sponsor:* National Housing Authority, Thailand

Sustainable Solid Waste Management in Kathmandu, Nepal; *Investigator:* G. B. Thapa
Sponsor: Royal Netherlands Govt.

Utilization of GIS for Planning in Developing Countries
Investigator: H. Morishita; *Sponsor:* JICA

High Strength Interlocking Concrete Blocks; *Investigators:* B. Lefebvre, Research Associates; *Sponsor:* Habitech

Micro Concrete Roofing Tiles
Investigators: B. Lefebvre, Research Associates; *Sponsor:* Habitech

Feasibility Study on Agricultural Use and Land Application of Sewage Sludge and Nightsoil Sludge for BMA
Investigators: H. Eckhard, C. Polprasert, P. Parkpian, R. Tinsley; *Sponsor:* BMA

Monitoring Cassava Cultivation and Production for Yield Forecasting: a Scientific and Technological Approach; *Investigators:* A. Eiumnoh, A. Noomhorn, S. Baimoung (Met. Dept.), P. Kesawapitak (DOA)
Sponsor: Thai Tapioca Development Inst.

Biodiversity and Gender Relations: A Case Study on the Impact of Intensive Shrimp Farming on Natural Resource Management in Chantaburi
Investigator: D. Tantiwiranond
Sponsor: AIT Research Initiation Grant

Gender and Telework; *Investigators:* G. Kelkar, K. Kanchanasut; *Sponsor:* NORAD

Cross-cultural Research on Women/ Gender and Development in Asia; *Investigators:* G. Kelkar, H. Hara; *Sponsor:* Japanese Govt.

Matrilineal Societies: Gender Relations and Economic Development; *Investigator:* G. Kelkar; *Sponsor:* The Netherlands Govt.

School of Management

International Risk Management Insurance in Asia
Investigator: P. Gougeon; *Sponsor:* French Govt.

Innovation Management in Medium-sized Firms; *Investigator:* B. Igel
Sponsor: AIT Research Initiation Grant

Entrepreneurship in High-technology Firms in Thailand
Investigator: B. Igel; *Sponsor:* (in cooperation with Inst. of Strategy and Int'l Business, Helsinki Univ. of Technology)

Comparative Financial Markets in Asia
Investigators: F.W. Swierczek, J. P. Gupta
Sponsor: EC

AIT School of Management-EC Partnership
Investigators: J. P. Gupta, F. Swierczek, P. Gougeon (ESCP); *Sponsor:* EC

Financing Technological Investment
Investigator: J.P. Gupta; *Sponsor:* French Govt.

International Joint Venture: A Case Analysis
Investigator: J.P. Gupta; *Sponsor:* EC

SAV Marketing Research Textbook
Investigator: M. Speece; *Sponsor:* SAV

Joint Venture Management
Investigators: B. Büchel, G. Probst, C. Rüling, C. Prange; *Sponsor:* Swiss National Foundation for Research

Competitive Strategies of Asian Airline Companies
Investigator: L. M. Johri
Sponsor: AIT/SOM

Management of Science and Technology - a Benchmarking Study of Korea with Reference to France and Japan
Investigators: L. M. Johri, Tai-Surp
Sponsor: Korean Govt.

Joint Venture Projects in Vietnam: Success and Failure Factors
Investigator: D.B. Khang
Sponsor: AIT Research Initiation Grant

1996 LIST OF FACULTY MEMBERS

FULL TIME FACULTY

(Full time faculty members are listed in alphabetical order. The italicized entries within the parentheses are their respective *Schools or Academic Centers*. Please refer to the list of abbreviations on page 47).

Nitin V. Afzulpurkar

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M.Sc., Leningrad;
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Associate Professor (*SAT*)

A.T.M. Nurul Amin

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B.Sc., Danish Hydraulic Inst.;
M.Sc., Tech. Univ. of Denmark.
Associate Professor (*SCE*)

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B.Sc.; DEUG., D.E.A., Paris VII;
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Assistant Professor (*SERD*)

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B.Tech., IIT Kanpur; Ph.D., IIT.
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Ray W. Archer

B.A. (Hons), Sydney; M.R.A.P.I.
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B.S., Oregon State; M.S., Ph.D., California, Berkeley.
Assistant Professor (*SCE*)

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B.A., Rutgers; M.S. Ed., Pennsylvania.
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B.Sc., Ceylon; Ph.D., Cambridge.
Chair Professor (*SCE*)

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Clemens Bechter

B.S., Univ. of Cologne;
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B.S.C.E., Mindanao State; M. Eng., AIT;
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B.Eng., High Tech. Inst. St. Antonius, Ghent;
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M.Sc., Rutgers Univ., USA; M.P.A., Univ. of
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B.Eng. (Hons), KMITT; M.Sc., Kansas;
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Assistant Professor (*SCE*)

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B.S., National Cheng-Kung;
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Ph.D., Pennsylvania State.
Assistant Professor (*SCE*)

Surapong Chirarattananon

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HONORARY FACULTY

Her Royal Highness Princess Maha Chakri Sirindhorn is an Honorary Faculty Member of the Institute associated with the Space Technology Applications and Research Program.

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Junichiro Niwa

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Athapol Noomhorm

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M.Eng., Chulalongkorn-SEATO Graduate School;
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P.C. Pandey

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Manukid Parnichkun

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Himangshu Paul

B.E., Univ. of Gauhati; M.Eng., Ph.D., AIT.
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Prof. Karl E. Weber succeeded Prof. Ricardo P. Pama as Vice President for Academic Affairs as from 1 July 1996. Prof. Chongrak Polprasert, former SERD Associate Dean, assumed the Deanship on 1 July 1996, succeeding Prof. Weber.

Mr. Jonathan Shaw became Chairperson of the Center for Language and Educational Technology on 21 June 1996, succeeding Dr. Michael Connelly.

Dr. Anila Sadananda was appointed to the new position of Dean of Student and Community Affairs on 1 January 1996. Dr. Roger Hawkey formerly served as Dean of Student Affairs.

INTRODUCING AIT



Founded in 1959, the Asian Institute of Technology is Asia's premier international graduate school of engineering and management.

March 1958

The SEATO Graduate School of Engineering project, first 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.

September 10, 1959

The School began its first class in hydraulic engineering with 18 students from Pakistan, the Philippines and Thailand.

June 1966

The SEATO Council of Ministers' Meeting in Canberra initiated steps to phase out its control of the Graduate School and to permit its establishment as an independent institution.

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.

AIT is composed of four schools, five academic centers, and the AIT Center in Vietnam. AIT carries out its mission through

Regular Academic Programs, leading to the award of Doctoral and Master's degrees and Diplomas;

Outreach Activities, such as short-term training courses and consultancies; and

Research Programs, which are conducted by faculty and students, or in cooperation with various institutions in Asia and other regions.

Responsibility for policy direction

rests with the Board of Trustees, which consists of some 40 members from Asia, Australia, Europe, and North America.

Governments, international organizations, NGOs, foundations, business and industry, and private individuals provide grants for scholarships for deserving students, faculty and staff secondment, operating funds, continuing education, equipment, research, campus development, and the AIT Endowment Fund.

Admission to the academic programs is open to academically qualified, self-supporting students.

LOOKING BACK (1959-1996)

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 campus in Pathum Thani province.

April 1979

AIT marked its 20th anniversary, with annual enrolment averaging 485 students and the alumni body consisting of 1784 graduates.

June 22, 1987

AIT received the Science and Technology for Development Award from USAID and the National Research Council, USA.

July 21, 1987

AIT awarded the AIT Gold Medal to His Majesty King Bhumibol Adulyadej of Thailand for outstanding leadership in rural development.

August 31, 1989

AIT received the 1989 Ramon Magsaysay Award for International Understanding.

October 29, 1992

AIT awarded the AIT Gold Medal to Her Majesty Queen Sirikit of Thailand for outstanding leadership in environmen-

tal protection and natural resources conservation.

May 17, 1993

AIT opened its first academic program in Vietnam under the Swiss-AIT Vietnam Management Development Program.

July 1993

The Institute's academic restructuring resulted in the establishment of four Schools: Civil Engineering, Advanced Technologies, Management, and Environment, Resources and Development.

February 1994

The AIT Center in Vietnam based in Hanoi was officially inaugurated.

November 13, 1995

The Asian Management Awards, Asia's most rigorous examination of corporate and organizational excellence, honored AIT with an award for Development Management.

August 1996

Prof. Roger G. H. Downer assumed the Institute's Presidency, becoming AIT's fifth President. Prof. Downer joined AIT from the University of Waterloo in Ontario, where he was Chair of the Department of Biology from 1986 to 1989 and since 1989 was Vice President for University Relations.

ABBREVIATIONS

AAT	Airports Authority of Thailand
ADB	Asian Development Bank
ASEP	Asian Society for Environmental Protection
CEC	Commission of the European Communities
CUC	Canadian Universities Consortium
DANIDA	Danish International Development Assistance
ESA	European Space Agency
ESCAP	Economic and Social Commission for Asia and the Pacific
FAO	Food and Agriculture Organization
ICIMOD	International Center for Integrated Mountain Development
IDRC	International Development and Research Center, Canada
ILO	International Labour Organization
IUCN	International Union for the Conservation of Nature
IPST	Institute for the Promotion of Teaching Science and Technology
JICA	Japan International Cooperation Agency
KEIDANREN	Federation of Economic Organizations, Japan
NECTEC	National Electronics and Computer Technology Centre
RISDA	Rubber Industry Smallholders Development Authority
SEAMES	Southeast Asian Ministers of Education Secretariat
SIDA	Swedish International Development Cooperation Agency
UCLES	University of Cambridge Local Examinations Syndicate
UN	United Nations
UNCHS	United Nations Commission for Human Settlements
UNIDO	United Nations Industrial Development Organization
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNEP EAP/AP	UNEP Environment Assessment Program for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
WHO	World Health Organization
WWF	Worldwide Fund for Nature

SCHOOLS, PROGRAMS, AND CENTERS

SCHOOLS

SAT	School of Advanced Technologies
SCE	School of Civil Engineering
SERD	School of Environment, Resources and Development
SOM	School of Management

PROGRAMS

AFE	Agricultural and Food Engineering
AAS	Agricultural and Aquatic Systems
BPT	Bioprocess Technology
CSIM	Computer Science and Information Management
EE	Environmental Engineering
EP	Energy Program
GE	Geotechnical Engineering
TE	Transportation Engineering
HSD	Human Settlements Development
IPM	Infrastructure Planning and Management
ISE	Industrial Systems Engineering
PPT	Pulp and Paper Technology
SEC	Structural Engineering and Construction
STAR	Space Technology and Applications Research
TC	Telecommunications
UEM	Urban Environmental Management
WEM	Water Engineering and Management

CENTERS

ADPC	Asian Disaster Preparedness Center
AITCV	AIT Center in Vietnam
CEC	Continuing Education Center
CLET	Center for Language and Educational Technology
CLAIR	Center for Library and Information Resources
RCC	Regional Computer Center
SAV	Swiss-AIT-Vietnam Management Development Program

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