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Clive K. Coogan
MSoc(Syd), PhD(Bristol), FAIP, FRSA, AM
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BA(Hons)(Qld), MA(Melb), MAPsS
Kenneth D. Green (to 3 October 1987)
CB, OBE, ED, BCE(Melb), FICE, FIA Aust, FASCE, FAUS, FTS, FRIPA; (Deceased)
Alison G. Hall (from 14 August 1987)
CerfTech(ElecEng)
Timothy R. Haslett
MA(Hons)(Auckland), MED Admin(UNE), MADmin(Monash), DipTch(NZ)
Ronald H. Peake
Donald R. Ritchie
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Paul K. Rodan (to 30 June 1987)
BA(Hons)(WA), MA(QLD)
R. Graham Rutter
BComm(Hons)(Melb), FCA
Kelvin Tighe
Richard J. Trembath
BSc(Melb), MED(Monash), PhD(Texas)
Geoffrey N. Vaughan
MSoc(Sydney), PhD(Melb), FRACI, FPS, FSHPA, MPSGB
William G. Walker
AM, MA(Syd), PhD(Illinois), TC(NSW), Hon FACE, Hon FCCEA, Hon FIEA(WA), Hon FACEA, FAIM


Secretary to Council
Dr. Graham A. Trevaskis
BA, BSc(Melb), MA, EdD(Florida), TPTC

Fellows of Chisholm
Trevor Pearce
BSc(Hons)(London), DSc(Melb), FTs, ARCS(Imperial College), FBGS, FACS, MACM
Awarded Fellowship 9 December 1985

Sinclair I. Miller
AO, MVO, OStJ, QPM
Awarded Fellowship 19 May 1987

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Statement

In accordance with Clause 8(ii) of the Order in Council of 3 March 1982, I present the Annual Report by the Council of Chisholm Institute of Technology on the operations of the Institute during the year ended 31 December 1987, together with a financial statement in respect of that year.

For and on behalf of Council,

(De) GN Vaughan, Director
Appointment of Director

Dr Geoffrey Vaughan, MSc(Sydney), PhD(Melbourne), FRACI, FPS, FSHPA, MGSGB, took up his appointment as Director of Chisholm Institute of Technology on 9 February 1987. Dr Vaughan was previously the Dean and Director of the Victorian College of Pharmacy since 1979. He commenced duties at the College in 1961 and held positions of Lecturer, Senior Lecturer, Head of School and Deputy Dean.

Dr Vaughan will continue to serve on the Therapeutic Goods Committee of the Department of Community Services and Health and will maintain his membership of the Advisory Committee of the National Biological Standards Laboratory. He is a member of a number of state and federal organisations and committees with interests in secondary and higher education.

Dr Vaughan’s research interests in the pharmaceutical sciences have been in the fields of drug structure-activity relationships and natural product chemistry. He is supervising a Master of Applied Science student at Chisholm in a project funded by the Bicentennial Authority which is looking at the chemical constituents of medicinal plants in association with other groups at La Trobe University and the Northern Territory Department of Health which will publish an Aboriginal Pharmacopoeia during 1988.

The new Director played rugby for Australia in 1957-58, was a Churchill Fellow in 1967-68 and has received a number of awards for his contribution to pharmacy education and to the pharmaceutical and related sciences.

Chisholm ’87

Chisholm had an exciting year in 1987 with an increased demand and enrolment by students, the introduction of nursing studies on the Frankston campus, the completion of three major building projects, increased research activities of the staff and the continuing strong relationships with government, business and industry.

Along with the above highlights the Institute continues to experience some frustration through lack of resources. Even with a very active minor works program and through the purchase of a significant number of capital items of equipment the capital allocations to the Institute are insufficient to meet the needs of the maintenance of old buildings and what might be considered in some cases as obsolete equipment.

The three new buildings completed in 1987 were the Technology Tower on the Caulfield campus constructed under the Project Management of John Holland Constructions Pty Ltd, and the Nursing complex and General Teaching Building at the Frankston campus constructed by the Project Managers, Civil and Civic Pty Ltd. Pizzey Noble Pty Ltd acted as the Institute Project Consultants for all buildings and their work on behalf of the Institute was reflected in the quality of the work, two of the buildings being completed ahead of schedule, and all buildings completed within budget.

The activities of the Faculty of Technology, and the Schools of Art and Design, Education, Nursing, Social and Behavioural Studies, and the David Syme Business School are reported later in this report. The Centres of Chisholm which provide short courses, consultancy, and contract research have had an overall satisfactory year and their activities are also reported elsewhere.

Vale Ken Green

Mr Ken Green, CB, OBE, ED, BCE (Melb), FICE, FIEAust, FASCE, FAIUS, FTS, FRIPA, Member of Council died suddenly in October 1987.

Ken Green was a member of the Institute Council from the date of the Constitution of Chisholm Institute of Technology on 2 March 1982 and was selected as the Foundation President of Chisholm. Throughout his years as a Member of Council Ken served continuously as a Member of the Staffing and Membership Committees. Ken Green guided Council and Chisholm through the early days of the history of the Institute. He dealt with sensitivity and care with those...
problems and concerns that were inherited with amalgamation, an event which touched on all the lives of Chisholm staff at that time. Ken readily won the respect and trust of his fellow Council Members, staff, and those students with whom he had dealings.

Ken Green’s style was easy, a characteristic for which he became well known. It was a deceptive style; it often disguised the real understanding he had of people, issues and events.

The Council, staff, and students of Chisholm record their sadness on the loss of Ken Green from the affairs of Chisholm and extend their deepest sympathy to his widow, Phil, and their family.

Retirements and Resignations

Mr Gerry Maynard, who had acted in the position of Director for 17 months during 1985–87 resigned during February following the appointment of Dr Vaughan.

Mr Maynard had previously been Associate Director (Planning and Resources) and before that, Acting Dean of the then School of Computing and Information Systems.

Gerry Maynard had worked at the Institute for 17 years and was instrumental in developing Chisholm’s Computer Education Section to the biggest unit existing in higher education in Australia.

Council records its appreciation to Mr Maynard for the contribution he made to the then Caulfield Institute of Technology, and in turn to Chisholm Institute of Technology; and offers best wishes to Gerry, and his wife, Lois, on his retirement.

Ms Jan Williamson, previously Dean of the School of Education, and more recently the Acting Associate Director (Administrative and Educational Services) resigned from the Institute during December 1987.

During most of 1987 Jan had been on secondment to the Victorian Post-Secondary Education Commission where she held the position of Acting Executive Officer, and more recently Executive Officer (Policy).

Jan Williamson commenced duties at the Frankston Teachers’ College in October 1975 and in turn was a member of staff at the State College of Victoria (Frankston) and Chisholm Institute of Technology. She worked tirelessly for the School of Education and made a big contribution during the time that she held a senior administrative appointment.

The Institute will keep close contact with Jan Williamson in the future years through the close working relationship which exists between the Institute and the Victorian Post-Secondary Education Commission.

Ms Helen Boyd, Registrar, resigned from the Institute during November 1987. Ms Boyd had been appointed Registrar in 1985 coming to Chisholm from the Prahran College of TAFE.

Dr Tucker, Dean of the David Syme Business School, resigned from Chisholm to accept the appointment of Professor of International Business at the University of Queensland. Dr Tucker will also be responsible for the Centre of International Business within the University of Queensland.

He had held the position of Dean of the David Syme Business School for a period of five years.

Dr John Onto resigned from Chisholm during 1987 having accepted the appointment of Professor of International Business at Georgetown University, Washington DC. Dr Onto held the position of Acting Head of the Department of Management and Acting Dean of the David Syme Business School at the time of his resignation.

Fellow of Chisholm

In accordance with Council policy, Mr Mick Miller, Chief Commissioner of the Victoria Police, was appointed to the position of Fellow of Chisholm in a special ceremony during August 1987. The award of a fellowship is the highest honour which the Chisholm Council can give in recognition to those people who have made an outstanding contribution to Chisholm and to the community.

Mr Miller was heavily involved in the introduction of Police Studies at Chisholm. As Chief Commissioner of Police he emphasised the need for education for police officers at all ranks and strongly advocated the introduction of a course at higher education level.

Later in 1987 Mr Mick Miller retired from his position of Chief Commissioner of the Victoria Police. Chisholm is honoured to receive him as a Fellow and looks forward to a long and continuing association with him.

Appointments

During 1987 Ms Jenny Zimmer was appointed to the position of Dean, School of Art and Design, which was vacant following the retirement of the Foundation Dean, Mr Harold Farley, who had retired during late 1986.

Ms Zimmer was previously Principal Lecturer in the School of Art at the Royal Melbourne Institute of Technology. She has an international reputation as an art historian and an art critic. She has been responsible for organising major art and sculpture exhibitions and displays throughout Victoria and has published extensively on art appreciation.

It was announced during 1987 that Mr Peter Chandler had been appointed to the position of Dean, David Syme Business School, with effect from 1 January 1988. The position became available following the resignation of Dr Ken Tucker during 1987.

Mr Chandler was previously the Head of the Department of Marketing in the David Syme Business School and was responsible with his colleagues for establishing the high profile for the Marketing courses at Chisholm.

In more recent times Peter Chandler held the position of Acting Associate Director (Planning and Resources) during the period when Mr Gerry Maynard held the appointment of Acting Director.

Ms Ann Boyle was appointed to the position of Staff Officer in April 1987. Ms Boyle previously worked as a Senior Administrative Assistant in the Personnel Branch of the University of Melbourne and prior to that held Senior Personnel Management, and
Industrial Relations positions in Australia and overseas.

Ms Boyle was appointed to the position following the resignation of Mr Tim Smith who accepted appointment as Executive Officer to the TAFE College Councils Association of Victoria.

Mr Wally Edwards was appointed to the position of Legal Officer following the resignation of Ms Vicki Korman. Mr Edwards has been associated with the Leo Cusins Institute and has worked in a number of legal firms and organisations following his graduation in law from Monash University in 1972.

During 1987 Mr Edwards’ position was re-titled to that of Institute Solicitor to more clearly define his role as the Legal Advisor to the Director and to Council.

Caroline Chisholm Awards

During 1987 the Council of Chisholm introduced Caroline Chisholm Awards for both Academic and general staff in recognition of outstanding contributions to the Institute. Separate procedures have been developed for academic and general staff and appointments are made by the Council following the receipt of nominations. The following awards were made in 1987.

Academic Staff Awards:
- Dr Brian Costar, Department of Humanities, School of Social and Behavioural Studies
- Dr Charles Don, Department of Applied Physics, Faculty of Technology
- Mrs Pearl Levin, Department of Computer Technology, Faculty of Technology
- Mr Paul Voumard, Department of Electrical and Electronic Engineering, Faculty of Technology

General Staff Awards:
- Mrs Joan Clasikowski, Executive Officer to the Directorate (on secondment to the Centre for the Development of Entrepreneurship)
- Mr Paul Rodan, Academic Secretary (on secondment to the academic staff of the School of Social and Behavioural Studies)
- Mrs Sue Phillips, School Administrative Officer, School of Education
- Mrs Eileen Wilson, Assistant Staff Officer, Staff Branch

Caroline Chisholm Award Certificates were presented to the recipients during the ceremony at which Dr Patricia Grimshaw delivered the inaugural Caroline Chisholm Oration. The ceremony was held as the first official function in the new Hall in the Technology Tower Building.

Dr Grimshaw, Reader in History, University of Melbourne, delivered the Oration in which she illustrated the contribution made by women to the history of Australia. She made special reference to the tireless work of Caroline Chisholm as a social worker in the early days of colonisation.

Twenty-five Year Service Awards

In 1987 the Institute Council introduced Service Awards to recognise 25 years’ continuous service of staff at Chisholm (which involved initial appointment at either the Caulfield Technical School or the Frankston 'Teachers’ College'). A certificate was awarded to each recipient who also received a glass paperweight, etched with the Chisholm Logo, and contained in a special presentation box. The 1987 awards were made to:
- Kevin Chynoweth – 1962 – Department of Chemistry and Biology, Faculty of Technology
- Ken Deutscher – 1960 – Department of Mechanical Engineering and Industrial Engineering, Faculty of Technology
- Bernard Farrelly – 1957–1984 (deceased), Premises Department
- Laurie Flynn – 1961 – Assistant Registrar, Frankston
- Ray Giles – 1960–1986 (retired), School of Art and Design
- Tom Heron – 1954–1986 (resigned) – Department of Mechanical and Industrial Engineering, Faculty of Technology
- Alan Thomas – 1959 – School of Art and Design

Other Highlights

With the space limitations it is not possible to include all the highlights for 1987 within the Directorate report. A summary of other events is contained in the next section under the heading ‘Highlights 1987’.

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Equal Opportunity and Affirmative Action

Equal opportunity issues were actively addressed by the Institute during 1987.

Progress has been made in the development of an affirmative action program as required by the federal Affirmative Action (Equal Employment Opportunity for Women Act) 1986. The Director has assumed the key role of Co-ordinator of Affirmative Action, the Equal Opportunity Committee has been developing details of the program, and the Equal Opportunity Officer has been responsible for its day to day administration.

The Equal Opportunity Committee has met regularly. Topics considered include government equity guidelines and access of disadvantaged students. A number of prominent external identities have been invited to the Institute to speak on various equal opportunity topics. Speakers included Dr Gretchen Paine, Higher Education Consultant to the Affirmative Action Agency, and Dr Ian Siggins, Acting Commissioner for Equal Opportunity.

Chisholm policy on sexual harassment moved into the implementation stage with the appointment of sexual harassment coordinators on both campuses. A brochure, titled 'Working Together against Sexual Harassment', was distributed to all students and staff.

The first women's group to be formed at the Institute was established during 1987. The group, Women in Chisholm, aims to promote equal opportunity for staff and students at Chisholm.
HIGHLIGHTS 1987

- Completion of the Technology Tower/Student Union complex including inaugural Caroline Chisholm Oration, the first function in the new hall.

- First year of teaching for the School of Nursing.

- Construction of new buildings at Frankston commenced and completed.

- New Dean for Art and Design/Appointment of new Dean for David Syme Business School.

- Chisholm gained sixth position in the Pentax Solar Car Challenge race from Darwin to Adelaide and second position in the Colleges category.

- Chisholm acted as host institution to a large number of workshops, seminars and professional meetings, covering all disciplines, during 1987.

- The Student Union incorporates to become the Chisholm Student Union Inc Mr A. O'Brien is appointed to the position of Executive Officer.

- The two-tier course conducted jointly by the Institute and Holmesglen and Frankston Colleges of TAFE sees the first students transfer to the second year of the Bachelor of Technology program at Chisholm.

- Chisholm arranges, through the Ministry of Education, the purchase of the Caulfield Technical School.

- Chisholm staff continue to win research grants, in open competition, from the Australian Research Grants Scheme, the Commonwealth Tertiary Education Commission, the Victorian Post-Secondary Education Commission and other grant-giving agencies.

- Induction meetings were held for new staff on both the Caulfield and Frankston campuses during 1987.

- A delegation from the Ministry of Education, Jiangsu Province, Peoples Republic of China visited Chisholm in 1987 to strengthen the ties between Victoria and Jiangsu and to examine possible exchange agreements between Chisholm and higher education institutions in Jiangsu.

- Through the Visiting Fellows scheme a number of distinguished visitors came to Chisholm in 1987.

- Release of 'Higher Education – a policy discussion paper' by Hon. J. Dawkins, Minister for Employment, Education and Training, a paper which could change the face of education in the years to come.
For the School of Art and Design the year 1987 was one of considerable change and enormous challenge. After the retirement of the foundation Dean, Mr Harold Farey, and Head of the Department of Ceramic Design, Mr Lindsay Anderson, there was an interim period in which Mr Richard Snedden, Dean of the School of Social and Behavioural Studies, became Acting Dean until I returned from a research project overseas to take up my appointment.

In this context of change the School has enjoyed an opportunity to reflect on its past success and its current reputation and to become actively engaged in a process of critical assessment of future objectives.

This process within the School of Art and Design coincided with a climate of change in the tertiary education system. Whilst maintaining and extending standards of artistic excellence, the School is mindful of change in Australian society and has become intent on matching its concepts with the population's increasingly better delineated understanding of Australian culture.

Jenny Zimmer, Dean

All courses proceeded with the requisite number of more than 250 enrolments and high demand for places - particularly in Graphic Design which conducted nearly 600 interviews for 60 positions.

Throughout the year administrative and academic staff and student representatives of all Departments worked with Advisory Committees to develop and produce the documentation necessary for the re-accreditation of all four Bachelor of Arts Degrees. This process was complete and through all Institute committees by the end of 1987.

Initial planning was undertaken for short courses to be offered to the public - particularly in the Computer Laboratory area where an $80,000 plus Conjure System was funded by an Institute Equipment grant.

The roofing of an outdoor teaching area at Frankston and the enclosure of a similar space at Caulfield will greatly assist the academic programs offered on each campus.

Planning began, in conjunction with the Faculty of Technology, on a pittance offered degree course in Industrial Design with the aim to meet the demands of industry by training designers of technologically sound, marketable, value-added consumer goods. A high level of industry collaboration will be sought.

Moves were made at the end of 1987 to initiate Master of Arts Programs with the identification of two probable candidates and several others considering application for candidature.

Craig Gough, Geoffrey La Gerche, Don Gue and Jim Williamson were promoted to Senior Lecturer positions. Stephen Fletcher was appointed as the Head of Department of Ceramic Design.

Staff who undertook Professional Experience Programs in 1987 included Paul Davis (studio ceramics and exhibitions in the USA); Max Thompson (preparation of exhibition of landscape paintings done at the Kakadu National Park, Airey's Inlet and Cape Liptarap); Henk Bak (examination of art collections in Germany, Holland, England and Indonesia); John Neeson (preparation of works based on the Queensland landscape and study tour, New York); Michael Kilson (computer-aided design and consultancy work for the Department of Tourism); and Jenny Allen (study of printed promotion techniques and materials).

The Dean was involved in the accreditation of courses in Victoria and interstate and was a member of course advisory committees at the Warrnambool and Bendigo Colleges of Advanced Education. Christopher Pyett, and other members of staff, formed a committee to accredit Art and Design courses in Zone 3 TAFE Colleges.

Awards, scholarships and prizes emanating directly from work done in academic courses of the School were as follows - Thomas Mulhall, BA (Fine Art) (Craft), winner of the Meat Market Cratf Centre's six-month residency in the cold-glass workshop; Phil Marcolin, BA (Graphic Design), won an Apple Computer for his design in the Apple Mac Poster Competition and eight other students had their designs reproduced in a widely distributed promotional calendar; Rosa del Vecchio, BA (Graphic Design), won the first prize - a study tour of Japan - in the Southern Cross Packaging Design Award; Trevor Gardiner, BA (Graphic Design), won a supplementary prize - the Visbyboard Award $250 - whilst Nicholas Cummins received the Silver Star Certificate. The Flett, Henderson and Arnold prize of $500 was awarded to Julie White and the $100 Drawing Prize was won by Teresa Walde, both BA (Graphic Design) students.

Six Graphic Design students joined others from the Graphic Design Department of Phillip and Swinburne on a three-week study tour of Japan. A group of Fine Art students saw the Phillips Collection and the Fred Williams retrospective at the Australian National Gallery in Canberra and staff arranged regular study visits for students to see exhibitions at the National Gallery of Victoria and elsewhere.

Staff at Frankston organised a weekend 'Glazing and Decorating Seminar' which attracted 28 professional potters and pottery teachers who were instructed in kiln-firing techniques, sand-blasting, lustre-glazing, black-firing, underglaze techniques and brush work decoration.

The year concluded with four major exhibitions of graduating students' works. The first, of printmaking, at the Print Council of Victoria's gallery in West Melbourne; Graphic Design at Paperpoint, Commercial Road, Prahran; Ceramic

Above, Jenny Zimmer.
and Glass Design and Craft on Level 2 of the Phillip Law Building and Fine Art in their own studio in D Block of the Caulfield campus. In conjunction with the Third Australian Sculpture Triennial, past and present students of Sculpture at Chisholm exhibited their work in the Caulfield Arts Centre.

Jenny Zimmer was the guest curator of 'Circle Path; Meander', an exhibition of Aboriginal paintings in the Carnegie Collection which was first shown in the Gryphon Gallery, Carlton and then in the National Gallery of Victoria.

The School engaged in considerable activity in research fields. From the Department of Ceramic Design, glass artists John Greig and Maureen Williams were invited to teach in the cold and hot glass studios of the Pilchuch International Summer School for Glass Artists, Seattle, USA.

Leanne Tregear, a Post Graduate Diploma student, made 'Chisholm's 25 Year Service Medallion'.

Kim Elliott, BA (Ceramic Design) student, was commissioned to make a $5,000 porcelain and glass mural for Containers Ltd, whilst Klaus Zimmer designed two major commissions for the new Parliament House, Canberra. These are two windows for the Prime Minister's Dining Room and two for the stairwells to the Chambers of the Senate and the House of Representatives.

At Frankston, Max Murray developed a washing system to prevent poisonous gases emitted from salt glazing kilns escaping into the air. This was a breakthrough because of the banning of salt glazing by the Environment Protection Authority.

Jenny Zimmer was invited to join a discussion group sponsored by the Australia Council and the Commission for the Future on the theme 'Creativity for a Productive Future'.

All History of Art and Design staff were involved throughout the year in the preparation of a text, Studies in Art History, to be published by Longmans in 1988.

Whilst the Ceramic Production Studio, the Access Studio and the Clay Workshop and, indeed, the courses offered on the Frankston Campus, have continued to serve the community, all Departments were -by the end of 1987 - engaged in planning for short courses to be offered to the public on a fee-paying basis.

John Hopkins judged the Drawing Prize at the Mornington Peninsula Arts Centre, whilst Glyn Williams became Artist-in-Residence at the Geelong Grammar School. Bernard Hoffert continued as art critic for The Advocate.

Fifteen third year Graphic Design students participated in the Melbourne Art Directors Club Mentor Scheme which pairs students with practising designers and advertising professionals. Brian Seddon was a judge of the Australian Book Publishers Association 1987 Book Design Award and worked with the City of Moorabbin Arts Advisory Committee to research and formulate policy on fostering the arts in that community.

The Dean joined art advisory committees of the City of Caulfield, Meat Market Craft Centre, Victorian Tapestry Workshop, Australia Post and was Honorary Curator on the Art Advisory Committee to Footscray Institute of Technology.

The School invited an extensive range of practicing artists and designers to present lectures and workshops including ceramic designers John Irving, Stephen Benwell, Gary Bish and Bente Manso; glass artists David Wright and Klaus Zimmer; graphic designers Marcella Minale and Rodney Nash, and printmaker, Ray Arnold.

Bede Clark of the Alliance for Arts Education, Kennedy Centre, Washington DC, was a short term visitor to the School of Art and Design at Frankston and demonstrated raku firing. Dr Calvin Seerveld of the Christian College Toronto, lectured to the School of Art and Design on 'Historicism and Art Theory'.

Peter Pinson of the City Art Institute, Sydney, spoke on the subject of Masters Degrees on the Visual Arts at a conference on post-graduate studies and research organised by Chisholm's Higher Degrees and Research Committee.

Below, Max Murray, with Technician, Mikhail Nudha (on ladder), testing the revolutionary salt glazing kiln.
Mr Peter Chandler was appointed Dean of the David Syme Business School to take effect from 1 January 1988.

Dr John Onto, Chairman of the Department of Management, left the Department to take up the position of Visiting Director, National Centre for Export and Import Studies, School of Business Administration, Georgetown University, Washington DC. Hazel Ryan was appointed as acting Chairperson of the Department.

Ian Stagg undertook a Professional Experience Program at the Tavistock Institute of Human Relations in the UK.

In conjunction with the Department of Banking and Finance, the Department of Management conducted the fifth International Studies Program, taking 34 undergraduate and postgraduate students to Japan and Hong Kong. Students and staff visited 44 international companies gathering information towards their studies in two subjects of their degree. Garry Harris, Peter Chandler and Sally Joy led a group of 45 students on an International Marketing Program through the USA as a part of the students’ Degree studies. They visited a number of major companies and universities.

The Bachelor of Business (Business Administration) was accredited in 1987. The first intake of students will be at the Frankston campus in 1988.

Economics staff from the Department of Banking and Finance attended the Annual Forecasting Conference and Conference of Economists. Dr. J. Tongzon and Dr. J. Hicks delivered separate papers at the Conference of Economists.

Several banking staff attended IRR seminars on latest developments in financial markets.

Christine Hutton from the Department of Accounting attended the AAA NZ Conference in New Zealand. Many Department of Accounting staff members attended the annual conference of the Australian Society of Accountants held in Melbourne.

Denis Fettes from the Department of Accounting used Professional Experience Program leave to investigate the link between investment advisors and the accounting profession.

Dr. J. Hicks from the Department of Banking and Finance conducted research in conjunction with staff at Deakin University related to the education and training of workers in the Geelong work force and was also involved in an employment impact study for the forest industry union in Tasmania.

Ian Sadler, from the Department of Marketing developed a data base for the Prime computer program ‘Pyramid’, a materials requirement planning package for the Graduate Diploma in Logistics Management course. It was made possible by a donation from Rosella-Lipton. Peter Link, also from the Department of Marketing, conducted a study for Sirotech-CSIRO on the Australian precision optical industry.

Laurie Webb from the Department of Accounting was appointed a member of the Education and Recruitment Committee of the Australian Society of Accountants.

The Department of Banking and Finance conducted a joint training program with the Australian Institute of Bankers on Credit and Lending. Seven ‘Women in Banking and Finance’ Seminars were held with an average of 80 participants per seminar attending from the finance industry.

During 1987 academic staff at the Frankston Campus represented the School on the Westernport Development Council, the Westernport Information Technology Centre, the Employment Initiatives Committee of the Frankston City Council and the Frankston Peninsula Enterprise Group.

Peter Spillard, Head of the Department of Marketing, University of Lancaster, UK, visited the Department of Marketing as a Visiting Fellow in September.
The School of Education completed another sound year of consolidation which saw the student demand for all of its courses far exceed the number of available places. Furthermore, high employment rates were recorded for the graduates of the Diploma of Teaching (Primary) and the Diploma of Teaching (Early Childhood).

Detailed work began for the reaccreditation of the Diploma of Teaching (Primary) and the development of a new multi-stranded Graduate Diploma in Educational Studies. The graduate diploma will incorporate the old Graduate Diploma in Art Education as well as providing new strands in Teacher Librarianship and Educational Administration. Both reaccreditations will be completed during 1988.

A Graduate Diploma in Health Science (Hospice Care) is being developed in collaboration with the School of Nursing. This new course, which appears unique to Australia, is planned for commencement in 1989.

The Division of Continuing Education has once again completed a most successful year by providing many new short courses to meet an ever increasing demand from the community. Included in these offerings was a most successful program for the teaching of protective behaviours.

A $30,000 grant from the Commonwealth Government enabled the School of Education to establish a tertiary study centre to service the needs of disadvantaged students entering study in a wide range of disciplines across the Frankston Campus of the Institute.

Ray Anderson, Acting Dean

Charles Meyer spent a second six months in China teaching EFL at the Union University in Beijing, following his colleague John Griffiths, who was there for the same reason during the previous six months, continuing the School’s strong links with China. Tony Townsend became Director of the new Australasian Region of the International Community Education Association, and in November responded on behalf of some 20 Australian delegates at the Annual Conference of the New Zealand Association for Community and Continuing Education in Rotorua.

David Gamble prepared a report for the School of Education’s School Board on ‘Preparedness for Teaching’ and continued with the on-going research project into student selection instruments with ACER partnership. Joe Dora researched the training and work of integration aides within the schools resulting in two videos, ‘Integrating Disabled Children into Mainstream Schools’ and ‘Education for the Disabled’ which was shown at several well attended public meetings. Bob Greaves was active with his innovative program ‘Children Working With Wood’ which was again enjoyed by hundreds of children at the Royal Melbourne Show with the help of students from the School of Education. Brian Murphy was appointed Project Director of the new Tertiary Study Centre, designed to help students in a range of areas where they experience difficulties. A grant of $30,000 was received to set up the Centre in June and a Management Committee planned student services including Study Skills and Report Writing.

ERAS once more conducted a highly successful and enjoyable series of lunchtime monthly talks/discussions – the ‘Brainfood’ sessions. Visitors from overseas and staff members returning from EEP leave, plus members with special interests were invited to talk to interested staff from across the entire Institute.

Tony Townsend presented an audio visual on ‘Community Education in Australia’ at the Fifth World Conference of the International Community Education Association in July 1987, Nairobi, Kenya. Staff members gave a number of papers and talks and several staff were invited as consultants to both overseas and local authorities. Bob Greaves gave a talk on Child Art to the Oakleigh/Malvern Pre-School Association Annual Conference; Charles Meyer gave a paper, ‘L1-L2 Interference - or just Learning Process Transfer?’ to the Annual Conference of the Australian Association for Research in Education; a talk on ‘Australia, Ethnic Diversity and ESL Teaching’ to post-graduate students of the University of Beijing; and a lecture on ‘Language Acquisition Theories’ to teachers of English at the Union University of Beijing. Dr Richard Trembath was consultant to the South East Asian Ministers of Education, Regional Centre for Education in Science and Maths, Penang, Malaysia on ‘Issues-Bound Science Education’. Bob Greaves made a number of advisory visits to Victorian schools; Yea and District Art Teachers In-Service Day; Local Councils Holiday Play Programs In-Service; Cranbourne North Primary School Curriculum Day; ‘Life, Be In It’ and the Bicentennial Authority in preparation for the Australia Day Weekend; a consultancy with Devon Meadows School regarding the operation of their new IEP, and Den-dong Primary School Arts Day Program planning. Ian Walker presented a staff development seminar to the Faculty of Technology. Tom Hill was made Educational Maths Consultant for Oxford University Press. Dale Ingamells received a grant of $11,000 from the Commonwealth Department of Health to develop teaching materials to slow the spread of AIDS in young Australians.

Probably the strongest area of the School of Education’s non-teaching areas is its concern for community interaction. Staff constantly offer advice and give talks to a remarkable variety of groups as well as the school communities. Bob Greaves talks on child art to the Sandringham Nursing Mothers Association and the

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Balnarring Kindergarten Parents group; Ian Walker spoke to a number of kindergarten parent groups on Language and Literacy and was a member of the VCE English FOSC group. Margot Guest continued her successful work with the Protective Behaviours program which she pioneered, including help with the development of teaching materials for post-primary schools which is now used nationwide and in the USA. She also organised the training of high school and technical school teachers in Protective Behaviours techniques, attracting participants from all over Victoria.

Probably the most significant and widespread community interaction is to be found in the work of the School's Division of Continuing Education. A large number of seminars, conferences and short courses aimed at keeping professionals abreast of developments in their particular fields were organised. Two of the most outstanding seminars were on 'Hospice Care' and 'Solving Incontinence Problems'. Over 30 short courses were run through the Division ranging from the influential 'Protective Behaviours' program to the Fitness Leaders Award Scheme, now a major training program for workers in the Health and Fitness Industry in Victoria. On average there are approximately 350 participants in this program per year. In 1987 the Division was successful in obtaining a number of grants for its various programs. The Chisholm Endeavour Project for Head Injured people, which to date has been supported by the School of Education, was fully funded through Headway Victoria.

The Division further established the close association it already has with the Frankston/Mornington Peninsula Hospice Service Inc, the University of the Third Age, the Southern Westernport Regional TAFE Board, the Frankston Hospital, Bayside Health Promotions Unit, the Crime Prevention and Education Consultancy Group, the Schizophrenic Fellowship, The Yooralla Society of Victoria, the Australian Association for Community Education and Headway Victoria.

The School was fortunate to have a visit from Professor Sung Wen-Lin, People's Republic of China, who presented a paper on 'Tertiary Educa-

Below, teaching Music to primary school children is one aspect of training for Education students.
The first operational year of the School of Nursing, 1987, has been a year of achievement. Newly appointed staff handled an unexpectedly large first intake of students at the beginning of the year and managed to conduct classes in temporary quarters for the year, pending relocation to the new nursing building in early January 1988. Concurrently the submission for Accreditation of the Diploma of Applied Science (Nursing) course was rewritten to incorporate the focus on health of the new program. This submission was approved by VPSHSC in June.

The Diploma of Applied Science (Nursing) course commenced with 132 students in February 1987. This reflected an unexpectedly high acceptance of place offers which originally aimed for an intake of 90 students. An exceptionally low rate of attrition left the School with 120 continuing students at the end of the year.

A total quota of 335 EFTSU has been allocated to the School for 1988 which reflects the growing significance of Chisholm as a centre for nurse education.

Dot Angell, Dean

A number of new staff were appointed this year to service the school. In addition to the Dean and Clinical Co-ordinator, two lecturers, two full-time tutors, two part-time tutors, an Administrative Officer and two secretarial staff joined the School. A further seven lecturing positions, two tutoring positions, a secretarial position and a nursing laboratory attendant position were filled for 1988. In addition, sessional clinical staff were employed during the weeks of clinical practicum. Staff from the Faculty of Technology, School of Social and Behavioural Studies and School of Education were also involved in teaching the science and psycho-social components of the program.

The health focus of the course has led to some interesting clinical experiences being arranged for the students throughout the year and we are grateful for the support of the nursing profession and special agency staff which has enabled these experiences to be undertaken successfully.

One example was the community health screening exercise run at the Karingal Hub Shopping Centre in June. This exercise was given strong support by both the community and the local media.

The new course is gaining wide recognition in the south-eastern metropolitan region and, to promote this, a number of functions have been hosted by the School of Nursing throughout the year for members of the community and local health services. Visits to secondary schools, participation in careers nights and two Nursing Expos held in Melbourne have also provided publicity for the course.

Staff have also been involved in a number of professional seminars and conferences throughout the year. The Dean of Nursing, Dot Angell, was actively involved as a member of the organising committee for the National Royal Australian Nursing Federation Conference on Standards for Nursing Practice. She has also presented papers at a number of other conferences during the year. Other members of staff have also been invited to present papers at national conferences in 1988.

Another achievement to be recorded was the development by students of the Division of Information Technology, under the direction of School of Nursing staff, of a computer program to facilitate the scheduling of nursing students to clinical placements throughout the course. This program required many hours of involvement from all concerned and although designed specifically to meet the needs of the growing school at Chisholm has already attracted the interest of other colleges.

In its initial year, it has been necessary for the School of Nursing to purchase a large number of equipment items to service the needs of the program and furnish the new nursing building. These have ranged from basic office and computer equipment to teaching and audio-visual equipment, and stocks for the nursing and science laboratories. Until the school grows to its full establishment, this level of acquisition will need to continue.

The establishment of a new School and the development of a new curriculum has been achieved only due to willingness of staff to work long hours and to work together - for this they are to be commended. The numerous aspects of such 'foundation' work have been carried out whilst maintaining a regular teaching load. Committees have been formed, policies and procedures developed, and liaison established with other departments and schools within the Institute.

1987 has seen the School of Nursing establish a strong foundation at Chisholm and also amongst other nursing programs in Australia.

As we approach 1988, the School is looking forward to further growth and the development of post-registration courses for nurses and in appreciation, we acknowledge all those involved.
During 1987 the School of Social and Behavioural Studies continued to develop its programs to meet the growing demand for entry to courses. In particular, a number of places in the BA were offered to disadvantaged students and student numbers in that course again expanded on the Frankston campus.

Further work was done on the development of future degree programs in Police Studies and the number of graduate students in the School again grew on the Caulfield campus, indicating the strong demand for these part-time, professional and innovative graduate diplomas.

In general it was a year marked by consolidation and refinement of effort in which areas of strength were further enhanced.

Richard Snedden, Dean

Department of Applied Psychology

Ronald Francis was awarded a PhD in psychology at the University of Melbourne for a thesis on the treatment of dental phobia. He attended a conference on the psychologist as expert witness at the Leo Cussen Institute under the auspices of the Association for Psychology, Psychiatry and the Law. He was on PEP during the second semester in professional work placements for updating experience and to rewrite the syllabus on Professional Development in Psychology.

Mr Barry Evans attended a conference in Canberra in July organised by the ANZ Association for Medical Education. He was a Visiting Fellow in the Department of Psychiatry, University of Melbourne for first semester and was awarded a $60,000 NH&MRC grant, with Dr R. Stanley from Melbourne University, for investigating consulting skills training in medical education.

Colin Cameron and Arthur Crook taught psychology at post-graduate level at the RAAF College to newly graduated pilot officers. Max Jory and Greete Hyman, Department of Applied Psychology, ran several stress management courses for the Commonwealth Public Service.

Peter Macris is a member of the Management Committee for Hanover House, an organisation for homeless people and is on the organising committee for the Australian Psychological Society conference in Melbourne. He also attended the UNESCO conference on Families and Culture in Paris.

Department of Applied Sociology

In the Department of Applied Sociology, Mr Jim Ross and Mr Barry Ellem produced the Final Evaluation Report on Waverley Helpmates Demonstration Unit for Commonwealth Community Services. Dr Moni Storz completed a Research Study on Sexual Harassment of Women in Public Places.

Dr Alan Simon was a Research Consultant for the Salvation Army’s Homeless Person Redevelopment Project in Melbourne.

Mr Barry Ellem completed the degree of Master of Education at Monash University.

Mr Jim Ross and Mr Barry Ellem were convenors and speakers at a Public Seminar on Intellectual Disability and the Helpmates Program. Dr Alan Simon gave a series of discussions on research with officers of Victorian Community Services. Dr Bruce Wearne co-organised the Cloverleaf Symposium, ‘Break Down or Break Through: Tertiary Education after the Collapse of the Binary System’.

Dr Moni Storz attended the Suggestopedia Conference at Adelaide University.

Dr Tony Walter was welcomed as a Visiting Fellow for the Department.

Department of Humanities

COMMUNICATION STUDIES

The Communications Studies Section received guest lecturers from Swinburne Institute of Technology, Morgan State University, Baltimore, Prince George’s Community College, Largo, Maryland, and Karl Marx University, Leipzig, German Democratic Republic.

LITERATURE STUDIES

The two main course developments during 1987 were the accreditation of the Literature major and the approval of the Cinema Studies Minor. The introduction of the Major has already led to a marked increase in the number of students enrolled in Literature subjects on both campuses. The Cinema Studies Minor will be offered for the first time in Semester Two 1988.

Student and staff interest in 1987 led to the development of an enthusiastic new society for the promotion of literary and associated matters. A series of seminars and associated events was held. For the first time a Literature Prize, provided by staff from the Section, was awarded (to Felicity Cogan). Another Literature student, Kim Cadd, won the Herb Thomas Memorial Award (valued at $2,750) for a student engaged in Literary and/or Media Studies.

Dr Brian McFarlane was consultant to the VCE English Field of Study Committee (Year 12 English and...
SCHOOL OF SOCIAL AND BEHAVIOURAL STUDIES

Literature), and was an examiner for an MEd thesis (novels into film and children's perception of these) for La Trobe University and a consultant to Cambridge University Press, for its proposed 'Companions to Australian Literature' series. He was also consultant for Peter Kemp's project, 'The Representation of Women in the New Australian Cinema', for the Australian Film and Television School. He chaired a seminar (Hitchcock Revisited) at the Melbourne Film Festival and continued as a leading representative on the VCE Year 12 Literature Syllabus Committee and as Editorial Consultant to Cinema Papers. Dr McFarlane participated in several interviews with radio stations and newspapers on his book 'Australian Cinema 1970-1985' launched by Tim Burstall, at the Village Retardschow Theatre. In conjunction with Mr Tony O'Grady, he was consultant to the Australia-China Friendship Society regarding proposed Australian Studies subjects.

Mr David Kerr researched the teaching of Australian Literature in Indonesia, India and Europe during the first half of 1987 and conducted writing workshops for Fellowship of Australian Writers at the McClellan Gallery.

Ms Sue Tweg conducted two courses in Communication Skills for Community Policing Squad members at the Police Academy, Waverley.

Ms Iris O'Leughter continued research into the interrelation between biographical material and the representation of the female artist as adolescent in the novels of selected Australian women writers. Ms O'Leughter's three month PEP program embraced film studies with emphasis on women in film and women film-makers and included attendance at the 1987 Cinema Conference in Montreal. Work on selected American writers and postgraduate Children's Literature Programs was also carried out.

Author Phillip Edmunds was Writer-in-Residence for four weeks in Semester one. Dr Pauline Nestor of Monash University and author of 'Female Friendships and Communities' lectured on Jane Eyre.

Political Studies

Mr Tony O'Grady gave a series of lectures on 'Chinese Politics, 1949-87', for the East Asian Studies Department at Melbourne University. Dr Brian Costar taught an Industrial Relations subject in the Post Graduate Diploma in Health Administration at Lincoln Institute.

Ongoing research is continuing by Dr Brian Costar on the National Party of Australia; by Mr Tony O'Grady on the Impersonment of Western Missionaries in the People's Republic of China; and by Dr Dennis Woodward on Chinese Agricultural Politics. Mr Paul Rodan is continuing a doctoral research on the Victorian Colleges Staff Association. Mr Tony O'Grady is Chief Examiner and Dr Brian Costar is a member of the Panel of Examiners for VCE Politics and both are also members of the VCAB Politics Management Committee. These roles required frequent visits to secondary schools.

Dr Bruce Coram took 12 months leave to take up a position as a Post-Doctoral Research Fellow at the Research School of Social Sciences at the Australian National University.

Police Studies

The Civil Engineering Department taught for the first time, subjects in Highway and Traffic Engineering as part of the Associate Diploma in Police Studies. It is hoped that students who have completed these subjects will be accepted as 'expert witnesses' by the Victoria Police Traffic Operations Group. The State Coroner, Mr Hal Hallenstein, was involved in discussions about this aspect of the Diploma.

A group of 25 students went on a study tour in Hawaii to complete a subject in Police Studies and to work for a week with their counterparts in the Honolulu Police Department. A further tour is planned to Fiji in 1988 where students will undertake further Police Studies subjects with members of the Fijian police force.

Approval documents were completed for a proposed BA (Police Studies) in late 1987; a reapproval document was also prepared for the Associate Diploma in Police Studies. Senior Lecturer, Rob Smith, visited Fiji in September to study aspects of the Fiji police force, particularly in relation to the education and training of that body. The section regrets the death in November of Mr R.C. Knight, a retired Commissioner, Victoria Police and a valuable member of the course committee for many years.

Welfare Studies

In the Welfare Studies area Mr Ian Murray attended the biennial workshop on tropical cyclones in Darwin. He was also involved in the planning of a conference on public welfare for Community Services Victoria. Mr George Clarke chaired a session of the conference on public welfare sponsored by Community Services Victoria at La Trobe University and was a training consultant in course development at the Staff Training College, Victorian Office of Corrections. He was also Chairman of the Southern Regional Community Corrections Committee.

Below, Dr Tony Keulamans with Visiting Fellow, Prof Ju Yuran.
1987 saw the Faculty of Technology continue to develop into a coherent cooperative working group.

The first Two Tier students who transferred from the Holmesglen and Frankston TAFE colleges to Chisholm arrived and their academic performance exceeded all expectation. In those subjects taken in common with students who had entered into Chisholm through the normal channels they performed significantly better than average as well as showing their motivation by achieving excellent results in those subjects especially designed for the Bachelor of Technology course. This is one of the two Faculty courses.

The other Faculty course, the Graduate Diploma in Computer Graphics continued into its second year. These two courses are interesting experiments not only in what they are endeavouring to do and the groups of students for which they cater but also because of the manner in which they are administered as Faculty courses in contrast to other courses in the Faculty which are associated with specific Divisions.

The one cause for concern in the Faculty during the year was the heart attacks of the Dean, Dr Ray Williams, but fortunately he is well on the road to recovery and it is expected he will be back at the helm of the Faculty early in 1988.

Ray Pugh, Acting Dean

Division of Digital Technology

The Department of Robotics and Digital Technology—the Bachelor of Applied Science (Digital Technology) saw an increased first year quota of 45 students. The revised syllabus resulting from reaccreditation in 1986 was successfully introduced in all years. Student demand for the course has been strong, and employer response to the initial graduates has been very satisfying.

Both Graduate Diplomas (Robotics and Digital Technology) experienced strong demand during 1987. There was an overall increase in student numbers in both semesters. A number of new subjects were introduced, including Proprietary Network Architectures, Communications Practical and Introduction to CIM.

A major equipment acquisition was an ADEPT SCARA-type robot with an advanced vision system. The ADEPT, which can move at up to 10 metres per second, can be programmed off-line in the VAL-II language, and will be used for teaching advanced robot programming and assembly.

The Computer Science strand continues to be the most popular of the Bachelor of Applied Science (Multi-discipline). A majority of graduates go on to careers in computing and data processing. As part of the reaccreditation of the course, an extensive review of the aims and objectives of the Computer Science strand was carried out, leading to a revised syllabus for all years resulting in students being offered a choice between various Computer Science topics, and the opportunity to study some aspects in greater depth.

Visiting Fellow, Professor Guangze Xiong from the Chengdu Institute of Radio Engineering (People’s Republic of China) spent six months studying real-time software design and development, and microcircuit design. Professor Xiong’s visit was funded by UNIDO.

Mr J Brem, Head of the Robotics and Digital Technology Department, was a committee member of the Australian Telecommunications Users’ Group, and Treasurer of the Australian MAP Interest Group. Mr R. La Brooy, Senior Lecturer in Robotics, was Chairman of the Victorian Branch of the Australian Robot Association.

The Robotics Laboratory in the Department of Robotics and Digital Technology continues to attract community interest, both during Open Day, and through a series of school visits which are held each year.

Department of Applied Physics—The most popular major studies with Physics in the Bachelor of Applied Science (Multi-discipline) were Computer Science and Applied Mathematics. Two final year students undertook thesis projects in Physics. Computer Science was also a popular subject in the first year of the Multi-discipline course with a high pass rate. At second year, Computer Imaging ran for the fifth consecutive year. Advanced Computer Imaging ran for the third time.

First year students in the Bachelor of Applied Science (Digital Technology) without VCE Physics were provided with background information, resulting in all students completing the subject. The instrumentation Physics subject introduced electrical and optical properties of materials as well as basic quantitative instrumentation theory to second year students. A major development was the creation of a digital signal processing unit in the third year of the Digital Technology course. The most popular subjects for students in the two-tier course were the computer based stream and business.

The Department provided service to the new Diploma of Applied Science (Nursing) on the Frankston campus with the subjects Applied Basic Physics and Chemistry I.

Fred Robilliard organised a four day technical tour of the observatories in NSW, including the CSIRO Radio Observatory at Parkes, and the Siding Springs optical observatory near Coonabarabran, during July for staff and students of the Astronomy elective.

The three main areas of research and consultancy activity were Acoustics, Computer Imaging and Tomography.
The Imaging and Tomography Groups hosted the Second National Symposium on Computer Image Processing entitled 'Automated Vision Technology' in July which was followed by two one-day workshops. The Computerised Tomography Group also held a National Pole Seminar at Chisholm on behalf of the Electrical Research Board.

During March and April, Dr Roy Ford from Salford University, UK, visited the Department to gain first hand experience of the impulse technique for measuring ground impedance at Chisholm and addressed a meeting of the Australian Acoustics Society at Chisholm on problems of noise abatement in England.

The Computer Imaging Group hosted two Visiting Fellows - Professor Terry Caelli, Killam Professor and Director for the Alberta Centre for Machine Intelligence and Robotics in Canada; and Colin Archibald of the National Research Council of Canada, who participated in Department research activities. Dr Mario Ferraro from the Instituto di Fisica Superiore, University of Turin, Italy also contributed to a Symposium at Chisholm. In March, Professor Larry Shepp from the Mathematics Research Department at AT&T Bell Laboratories, USA, a world authority on computerised tomography presented a Seminar on image reconstruction. Dr Anthony Constantinides of Imperial College of Science and Technology gave a talk on Image Compression Techniques in August.

Division of Engineering and Industrial Technology

The Graduate Diploma in Project Management continued into its second year with 15 students remaining in the course. Due to its popularity it is envisaged to offer the course again in 1988 with a scheduled intake of 30 students.

A one-week field camp was held for third and fourth year Civil Engineering students at Howmans Gap where students were given the opportunity to work in a team and to exercise important management skills. Projects like the design of ski trails, a low level village and a multi-story carpark were undertaken.

ICI sponsored a new Mileage Marathon vehicle with a $10,000 grant. The vehicle is undergoing continuing development and should achieve 4,000 miles per gallon.

The Solar Vehicle Project with $120,000 external sponsorship was brought to a successful conclusion in the Darwin-Adelaide race gaining sixth place out of 23 starters in the World Solar Challenge. More than 50 students and staff from the Division were involved in design and preparation over the last two years.

The first year Engineering students were presented with the 1987 BHP Steel Cup for their excellent efforts in the BHP Ingenuity Games. Individual prizes were awarded for entries in the spaghetti bridge and mousetraps races competitions.

Department of Civil Engineering

The Department was saddened by the sudden death of Lecturer, S.N. Rao during the year.

A number of timber engineering activities were carried out by Senior Lecturer, Geoff Smith. Regrettably, no funded research was undertaken in 1987 in Civil Engineering but consultancies were carried out by H.R. Miller and G.W. Smith.

Several seminars and conferences were organised including 'Engineered Timber Structures in Australia and New Zealand'; 'Timber Structures a Local and Overseas Perspective' and a two-day 'Concrete Practice Course' for industry organised in conjunction with the Cement and Concrete Association of Australia.

Professor Barry Hillson of Brighton Polytechnic, UK was a Visiting Fellow for four weeks. During this time he presented seminars on glued laminated beam construction and helped move to establish an Australian glued laminated beam manufacturer's association, with Senior Lecturer, Geoff Smith.

Department of Electrical and Electronic Engineering - Enrolments were up from 1986 in the second and third years of the course and down in the fourth year. Owing to student demand a quota was applied to the student numbers entering second year of the electrical engineering degree course which resulted in a high student pass rate in the second year.

A laboratory 'wish list' was prepared to maximise chances of using funds which often come available. A Technical Services Committee and a Safety Committee were set up to optimise efficiency in technical staff usage and allow broader staff input into reviewing and determining operation procedures for the workshops and laboratories.

A Graduate Association was formed with the aims of promoting social functions, propagation of information on short courses and other educational programs, employment information and consulting services.

Paul Voumard received a Caroline Chisholm award for outstanding research and development activities and was promoted to Senior Lecturer.

A Department structure sheet was implemented to increase specialisation emphasis and to delegate full discipline responsibility to the appropriate Senior Lecturers.

Max Telfer spent semester one on a study program to update his theoretical knowledge of industrial computer process control theory and to advance completion of a textbook and associated software.

An Industrial Liaison Committee was formed to promote increased industrial consulting, professional development courses and college/industry research. A seminar on 'Power System Protection and Control' was held in September at Chisholm for the VPSEC Electrical and Electronic Engineering Education Group. A three week full-time Control Systems program for RAN officers was again held in 1987.

Research on HV Switchgear Condition Monitoring proceeded with ERB sponsorship and a grant for $7,435. Research was commenced in the production of a reflective paint for a paint manufacturer and a software package is being developed for control system simulation.

Several electrical and electronics companies were generous in their sponsorship of students.

Department of Mechanical and Industrial Engineering - Industrial Engineering relocated five academic offices, one technician room, three
The submission for reaccreditation of the Bachelor of Applied Science (Computing) was completed in June with a change to semester subjects instead of full year subjects the major development.

The Software Development Department has expanded considerably and enhanced its teaching program at the post-graduate level ensuring its program reflects current thinking in this rapidly changing area.

A number of staff undertook Professional Experience Programs which included visits to the United States of America.

Mr Graeme Shanks, Senior Lecturer, Department of Information Systems, worked with Business Consultants, Arthur Young, on computer supported software engineering which included visiting Knowledgeware, a software developer in Michigan, USA and attending a world conference on Artificial Intelligence at Seattle.

Mr Peter Torekofaly, Senior Lecturer, Department of Information Systems, used his leave to investigate the role of computing in Nursing. His research has resulted in the development of an introductory Nurse Computing subject in the Diploma of Applied Science (Nursing) at Chisholm.

Mr Peter Binding, Lecturer, Department of Software Development, spent six months with Honeywell Information Systems specialising in transaction processing systems which included visiting key Honeywell centres in the USA who specialise in transaction processing.

Research was performed by the Department of Software Development covering computer assisted software engineering, the results of which are being used in relevant undergraduate and post-graduate programs.

Three highly successful seminars were held in conjunction with the Pearcey Centre for Computing on "Systems Analysis Art or Science", "Information Resource Management" and "Relational Data Base" which were well supported by industry. The Division organised a very successful Computer Assisted Software Engineering (CASE) Fair at which manufacturer of CASE technologies demonstrated and provided details of their products.

Staff from the Division attended a number of seminars including the ACS Annual Conference in Melbourne and the CAE Computing Conference in Adelaide and specialised courses covering areas including functional programming, software development productivity, project management, data dictionary and other topics.

The Division continued its links with industry. The Department of Information Systems secured sponsorship by Arthur Young of an Arthur Young Senior Lecturer position which will be appointed early in 1988.

A number of organisations were approached to provide sponsorship of students and this scheme will be introduced in 1988.

The Division was fortunate to have as a visitor Mr Li Zuo-Qing from the...
Division of Mathematical & Environmental Sciences

Department of Chemistry and Biology – The Department continued to offer high quality courses at both undergraduate and postgraduate level. Work started during the year on enhancement of the aquatic science minor to ultimately provide a major study.

Three Chemistry students were awarded Masters Degrees at the Graduation Ceremonies.

The Department provided service teaching to the Division of Engineering and Industrial Technology and to the School of Education. In addition, for the first time, they managed the Chemistry, Bioscience and Microbiology components of the new Nursing course. This will become a major part of the Department's work in future years.

Drs Ian Campbell and Jayant Bapat spent time on Staff Development Leave and Ian McKelvie started working towards a PhD at La Trobe University. Kevin Chynoweth, who has nearly completed work for a PhD at Monash University, was recognised by both promotion to Senior Lecturer and for 25 years of service to the Institute. Peter Finch retired after working in the Department for more than 20 years.

Department of Mathematical Sciences – The Bachelor of Applied Science (Multi-discipline) course was reviewed and examined by the Re-accreditation Committee during 1987. One of the major recommendations accepted was the formation of a new first year subject, Mathematics and Scientific Computing. The new compulsory subject obliges all students to obtain a grounding in computer skills as well as having a substantial introduction to mathematical and statistical methods.

Two compulsory second year mathematics subjects (MAT228 and MAT229) replaced a single subject (MAT227) in the Bachelor of Applied Science (Digital Technology).

The Bachelor of Applied Science (Computing) was re-accredited with an increase in emphasis on discrete mathematics. The micro-laboratory was more fully utilised for teaching statistics.

The Mathematics Department also taught mathematics and statistics in the Bachelor of Business, Engineering and Arts and provided service to a number of postgraduate courses including the Graduate Diploma in Robotics, Water Science and Marketing.

P.B. Lochert and C.R. Stather presented a short course for staff in July on the features of the statistical package SPSSX. The course was funded by the Educational Development Unit.

The Jennings Industries prize of $100 to the outstanding first year student in mathematics in the Bachelor of Applied Science (Multi-discipline) was awarded to Hanh Nguyen. The Australian Bureau of Statistics prize of $100 to the outstanding student in the subject Statistics and Operations Research in the Bachelor of Applied Science (Multi-discipline) was awarded to Alan Morgan. The CAMM prize of $100 for the most outstanding student in Mathematical Modelling was awarded to Paul Pitsillou.

John Jeavons used six months PEP to undertake research under Professor J.N. Crossley (Monash) in the area of Logic Programming which should lead to a PhD.

A. Van Oosterwijk completed, through CAMM, a major upgrade for Telecom Australia of the program SIGNET initially written by him while a guest worker at the Telecom Research Laboratories in 1985.

A. McLean worked with the Educational Development Unit to analyse and report on the questionnaire answered by first year students.

Below, Senior Lecturer, Roger La Brooy, in the Robotics Laboratory.
Registrar’s Department

ACADEMIC SECRETARIAT

The Academic Secretariat provided support to the Academic Board and its major Standing Committees during the year. In March and April, elections established a Board which reflected the guidelines suggested by the Ministerial Working Party on College Councils and Committees. The major Standing Committees (Academic Programs Committee and the Higher Degrees and Research Committee), continued to function in their respective areas of course approval and, the administration of research. However, these basic responsibilities were augmented by the development of initiatives which involved each of the Committees at the level of policy and policy administration. Thus, their work increased during the year as did the work of the Secretariat.

The Academic Programs Committee approved 14 continuing courses for subsequent consideration by a Reaccreditation Committee. In accordance with the policy of the Accreditation Board the Secretariat assumed responsibility for the organisation of each Reaccreditation Committee and its Report. Under this method of reaccreditation the final report and recommendation is forwarded by Council to the Accreditation Board. The Academic Programs Committee received six proposals for new courses. These course proposals were: Bachelor of Arts (Police Studies), Graduate Diploma in International Business, Graduate Diploma in Educational Computing, Graduate Diploma in Health Sciences (Hospice Care), Graduate Diploma in Municipal Engineering, and Bachelor of Business in Agribusiness.

The Higher Degrees and Research Committee established the terms of reference and guidelines for the Central Research Fund, introduced in 1987. During the year, a VTEC Working Party considered the introduction of doctoral candidates into Colleges of Advanced Education. The Higher Degrees and Research Committee and the Academic Board considered this proposal and a policy, as adopted by the Board, was forwarded to VTEC. It is anticipated that PhD candidates will now be admitted into Chisholm under appropriate guidelines.

The decision by the Institute to seek Declared Status involved the Secretariat in the production of relevant documentation concerning areas such as academic procedures, and accreditation. It is anticipated that the submission for Declared Status will be considered during 1988.

PUBLIC RELATIONS OFFICE

The Public Relations Office organised its publications and rationalised the corporate image of Chisholm during the year. The Chisholm Gazette was published monthly, and a number of other publications were completed with a uniform design: the Handbook, the Student Manual, and a series of brochures – Undergraduate Courses, Post-graduate Courses, and Advice for Disadvantaged Students. In addition, a Chisholm Prospectus was prepared for early publication in 1988 and the 1986 Annual Report was prepared and published. A publication plan was established to eliminate duplication of purpose and content in Institute publications.

Publications were prepared for other departments, including Welcome to Chisholm, a staff induction booklet, and assistance was provided for the Library’s annual report, brochures for the Equal Opportunity Officer, Printing Services, the School of Nursing, the Marketing Department, and the Division of Information Technology. The Office’s desktop publishing system continued to increase productivity and reduce costs.

A Chisholm Style Manual was published, prepared by the Office in conjunction with Mr Brian Seddon, lecturer in the School of Art and Design, covering matters of Institute writing and design style, and guidelines set down for the use of the Institute logo. The Institute policy on Public Relations activities was approved by the Council of Chisholm following the deliberations of a Working Party, and was included in the Manual. Guidelines for avoiding sexist language were also prepared for this manual by the Office.

Advertising procedures were streamlined to prevent ad hoc book-
The opening of the Tower Hall enabled Student Administration to relocate the enrolment process to provide a 'one-stop-shop' where all procedures could be completed in one location. And, in an attempt to improve the service to users, it was agreed that School Administrative staff would input enrolment data.

Towards the end of the year surplus funds were put towards an upgrade of office equipment.

Involvement in staff development was strong in 1987 with staff at all levels undertaking development programs. Most positions in the department were evaluated under the Hay Position Evaluation process resulting in four reclassifications. The process of drafting position descriptions was used with effect to redefine duties with respect to changes in procedures.

Student Administration was again successful in organising the Institute's Graduation Ceremonies and assisted in the preparation and presentation of Open Day.

The Senior Staff of the Department continued their involvement on Institute Committees. Externally, the Acting Assistant Registrar (Students) was a member of the VTAC Application Procedures Committee, the Victorian Vice Chancellors Committee on Selection and acted as Regional Coordinator and Liaison Officer with VCAB on VCE (TOP) Accreditation and Moderation.

### Records Administration and Telematics

In 1987, the Central Registry 'Keyword Register System' program was totally re-written by the Management Information Services Department. The creation of a more user-friendly program resulted in better response times and easier information retrieval. Improvements to the reporting facilities resulted in savings and economies in the use of computer stationery.

In May 1987, the Institute's first computerised internal telephone directory was produced on the VAX system, offering on-line access to VAX network users. The purchase of additional hardware for use at the Frankston PAIX opened the way for the electronic transfer of directory update information between the telephonists on each campus.

1987 also saw a noticeable increase in the internal billing activity of the section. This resulted from the Finance Committees decision that the 'user-pays' principle should be uniformly applied throughout the Institute for the purpose of recovering Institute-overheads costs.

Below, graduation day is important to all students.

### Resources Branch

The Government Policy of the previous year seeking to maximise the intake of new undergraduate students continued in 1987. The Victorian State Government continued to provide some funding for undergraduate tertiary students as part of its Youth Guarantee Initiative. This funding provided 115 equivalent full-time places for new to course undergraduates as well as 110 equivalent full-time places for returning students. In addition, the 128 EFTS enrolments in the School of Nursing which commenced teaching in 1987 are also funded through a mix of State and Commonwealth grants.

This year saw the first enrolments on both campuses of students into the Bachelor of Technology course. The first year of this course was undertaken at Frankston College of TAFE or at Holmesglen College of TAFE.

The actual number of students enrolled by campus at 30 April 1987 were 5,484 at Caulfield, (an increase of 37 students or 0.68 per cent) and 1,782 at Frankston (an increase of 275 students or 18.25 per cent).

The School of Art and Design, the David Syme Business School and the School of Social and Behavioural Studies all operate courses on both campuses. In 1987 the Business School commenced a second Post Graduate Diploma course at Frankston.

The Schools of Nursing and Education are based exclusively on the Frankston Campus and the Faculty of Technology is exclusive to the Caulfield campus, other than for two undergraduate courses, in computing and technology.

The funded quota for Chisholm for 1987 was 5,550 EFTS, actual enrolments as at 30 April 1987 totalled 5,655 EFTS.

In 1987, Chisholm experienced a significant shift towards full-time students — no doubt influenced by the introduction of the Higher Education Administration charge. The overall Chisholm 1985-87 full/part-time student numbers are:

<table>
<thead>
<tr>
<th>Year</th>
<th>Full-time</th>
<th>Part-time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>3,441</td>
<td>3,050</td>
</tr>
<tr>
<td>1986</td>
<td>3,751</td>
<td>3,105</td>
</tr>
<tr>
<td>1987</td>
<td>4,189</td>
<td>2,936</td>
</tr>
</tbody>
</table>

The ratio of male/female students
decreased to 1.36:1 in 1987 from 1.47:1 in 1986. The 1987 male/female ratio for new enrolments was 1.11:1 compared to 1.28:1 in 1986.

The number of overseas students decreased slightly in 1987 to 257 from the 288 enrolled in 1986, caused by a major decrease in overseas enrolments in the Division of Engineering and Industrial Technology.

Tertiary awards totalled 1,393 including 273 post-graduate awards and five masters awards. (See Facts and Figures, page 29-30 for full details.)

**Staff Branch**

During 1986/87 the Institute engaged the services of an external consultant to conduct a review of the services provided by the Staff Branch which existed in the traditional role of being the custodian of personal files, the facilitator for receiving new staff to the Institute and processing resignations.

As a consequence of this review, an expanded role was envisaged for the perceived Institute needs of the future, and the Institute proceeded to recruit a new Staff Officer, using the Consultant's findings in its criteria for the selection of the successful applicant.

Ms Ann Boyle took up the position in April 1987 of Staff Officer for the Institute. After six months in the role of Staff Officer, Ms Boyle produced a review document which had as its brief a 'hands-on' response to the Consultant's review as well as a direction for the future.

This review was received and endorsed by the Director who requested comment from the Council's Staffing Committee. The department's new title of Human Resources Department will be instigated in 1988.

The main areas of service during 1987 were:

- Worksafe - processing claims for work-related injuries.
- Occupational Health and Safety - providing services aimed at preventing accidents in the work place.
- Superannuation - processing matters relating to superannuation.

**Higher Degrees and Research Committee**

During 1987, the work of the Committee was concentrated on its responsibilities concerning post-graduate research at Chisholm. These responsibilities involved the administration of Masters by Research candidates, the Institute's Central Research Fund, and the provision of advice on research policy to the Institute.

**Masters by Research Candidates**

Candidates in Masters programs were located within four of the six schools and, the Committee anticipates that applicants from the School of Art and Design will be admitted to candidacy in 1988. As of 30 April, 1987, there were 29 candidates enrolled in Masters by Research programs at Chisholm.

During the year the following candidates qualified for the Masters Degree:

- Master of Applied Science: Mr M. Jones; Ms L. MacMillan; Mr T. Roger
- Master of Arts: Ms P. Tischler; Ms S. Trajtan; Mr S. Whyte
- Master of Business: Mrs A. Clarke

In September Mr B. Weston received a Research Achievement Award from the Australian Water Research Advisory Council, for his Master of Applied Science thesis, submitted in 1985.

**The Central Research Fund**

The establishment of the Central Research Fund was an important achievement for the Institute. The fund, established with an initial grant of $20,000, will operate from 1987 onwards. The Higher Degrees and Research Committee produced the documentation relating to the introduction of the Fund and they administer the Fund. In its first year, the Committee received 20 applications for grants, of which 16 were successful. Recipients of grants will pursue projects culminating in Final Reports due in March, annually. The Committee is confident that the Fund will stimulate interest in research and that it will enhance the reputation of the Institute.

**Research/Research Policy**

The debate about the place of research in tertiary institutions such as Chisholm, continued, and the Committee has been involved in these considerations. In November the Committee held a Seminar on Research which addressed a range of issues concerning research, eg, research funding and post-graduate programs at Chisholm. Approximately, 80 people, including representatives from colleges in Gippsland, Warrnambool, Melbourne and Sydney, as well as Chisholm staff, attended. During the day, participants were addressed by specialist speakers and invited to take part in a variety of workshops. The seminar was successful, in that it stimulated interest in research and provided information to staff about research at Chisholm.

During the year, the Committee noted the VTSEC Working Party Report which examined the implications of the entry of doctoral candidates into CAE's. The Committee's supportive advice on policy was accepted by the Academic Board and forwarded to VTSEC. It is now possible that PhD candidates will be admitted into Chisholm in the future.
Computer Centre

Processing statistics display a very ordinary year in terms of activity of users, leading up to a frenzy of processing at the end of second semester unprecedented in our history. The load on all systems in the final weeks of the academic year placed enormous strains on Computer Centre resources, hardware, software, communications and personnel. Comments about the unevenness of the processing load on central computing systems have been made every year, but in 1987, the disparity between peaks and troughs was bad.

Logins to systems increased by 20 per cent; there were 15 per cent more connect hours utilised by 10 per cent more registrations. It is the latter that creates more Operational management problems for Computer Centre management. In total there were 444,446 logins to computer systems, up 75,759 from 1986. Users stayed connected to the systems for 185,021 hours, an increase of 23,899 hours over 1986; and 7,044 user registrations, 617 more than 1986, kept the operations, systems and Input/Output staff on their toes.

In the middle of 1987, the status of the Centre for Business Technology VAX 11/750 changed, and became a central computing resource, managed by the Computer Centre. Its initial use was in office automation, used by departmental secretaries and Directorate secretaries, together with the OA training for Business Technology students. This however, changed towards the end of 1987 when an investigation into central computer resource rationalisation resulted in a decision to have the VAX 11/750 used to run a proprietary FINANCE package for the Institute's financial accounting.

TAFE usage ceased altogether in 1987, staff processing increased greatly, engineering considerably reduced their involvement (probably because of departmental micro laboratories, similar to DEBS in 1986), and the Computer Centre use increased dramatically. The latter can be explained in a newly introduced system, serving all of the VICNET Colleges, in an automatic electronic mall pick up and delivery system, written, implemented, controlled and managed by the Chisholm Computer Centre. VICNET POSTIE enables any VICNET user, on any system, to create mail on their own home system, using their own well known mail procedure, addressing it to a known VICNET node, and mailing it electronically into their own computer system MAILBOX. VICNET POSTIE operating from Chisholm PRIME 850, runs continuously around VICNET, logging into each node's MAILBOX, picking up mail, depositing mail, 24 hours a day, seven days a week. Each node then places the mail in the correct destination. Respondents are able to contact each other via this method without having to have registrations on other systems, or having to remember the operating instructions of several computer system mailing routines. Thus, contacts of users from Gippsland to Warmabool, Ballarat to Chisholm, RMIT to Footscray, Victoria to Melbourne etc. was accomplished.

Dial-in activity increased, and was catered for by additional dial-in lines. Over 48,800 login sessions were commenced, an increase of 16,205 from 1986. This demonstrates the high level of micro-computers in students' home environment and direction of user connectivity for the future.

Access to the 24 hour/seven day terminals rooms showed strong attendances after hours. Although this demand has not increased, due to many factors including users home environment and dial-in access, the facility was used sufficiently to warrant its being open. The huge peak at the end of second semester resulted in overnight and weekend queuing and user frustration.

System Programmers now have the task of keeping track of six different Operating Systems within the Computer Centre. This additional load precludes any major innovations and development from staff. This also impacts on the Operations staff, who need to know the differing complexities between the various systems under their control.

Community Services

Community Services focused on developing closer teamwork relationships between the various services and service providers on both campuses. In-service meetings for professionals from both campuses were held and outside speakers were invited to provide input on professional and community resource options.

At Frankston one new counsellor (0.5) was appointed to keep pace with the dramatic increase in student growth on the campus. In addition, the demand for the far for service medical practitioner increased, reflecting the need for, and user satisfaction with, this service as well as the high standard of service delivery. The Campus Interview Program on campus consolidated and broadened its activities, thus achieving a successful result for final year students.

The Careers Advisory Service accepted responsibility in 1987 for co-ordination of the Institute's Schools Liaison Activities and continued to provide valuable information, guidance and counselling to students - whatever their vocational needs. It facilitated final year students in their transition to the workforce and conducted a survey of 1986/87 graduates which found that nearly all those looking for full-time or part-time work were successfully 'placed' five months after completing their courses. During 1987 the Child and Family Service assisted students and staff on both campuses with arranging child care placements for their children; counselled families on childhood behaviour, parenting difficulties, adjusting to dual role demands and coping with leaving children in care; raised awareness of the child and family service, and the on-campus, off-campus and home-based child care facilities; and liaised with on-campus child care facilities and the children services of the City of Caulfield and the City of Frankston.

The Counsellors began a very successful series of courses for staff and students with a focus on 'taking care of oneself'. Courses were offered to both students and staff in Stress Management and Assertiveness Training. Single sessions in Assertiveness Training and Stress Management were run for students in several schools.

The Counsellors ran workshops on Communication Skills for the staff of the Caulfield Child Care Scheme.
EDUCATIONAL SERVICES

They were also involved in skills development in the areas of Hypnosis and Family Therapy and were involved in a number of Chisholm Committees. They continued to provide individual counselling for students with personal difficulties and Austudy and Administrative problems.

Health programs included Immunisation, First-Aid Training, Blood-pressure Surveys, advice about sexually transmitted diseases (including AIDS). There were ongoing associations with Family Medicine Programs and a new association with Monash University and various nursing schools including Chisholm/Poolscray.

The Legal Service funded by the Legal Aid Commission employed Annie Pepper for seven hours a week as a community lawyer after Marilyn Beebe resigned from the position in May. At least half of the clients seen by the legal service were Chisholm students. Students frequently sought advice for motor vehicle accidents, criminal and traffic charges and family law.

Educational Development Unit

Advisory and Evaluation Section

Advisory services in 1987 were restricted, owing to a continued lack of staff in the section, pending the outcome of the review of the EDU that was instituted in 1986.

In conjunction with the David Syme Business School, the development of an in-house videotex system proceeded to the stage that the potential of the system for enhancement of external communications is now clearly demonstrable. However, owing to expected financial constraints in 1988, this development will likely receive a lower priority in 1988.

Some activity continued in the provision of informal advice to staff regarding personal computing, supported by development of a microcomputer-based database detailing resources relevant to personal computing, in preparation for a large-scale staff development program on this subject in 1988.

Two seminars were held for recently appointed staff, one on the Caulfield campus in April and the other at Frankston in September.

A workshop on SPSS-X was held in July by contracting staff from the Faculty of Technology.

The evaluation program, consisting of Subject Evaluation and Teacher Evaluation questionnaires continued to be used extensively by staff of the Institute.

Language Development Section

The section now thoroughly consolidated its position at Chisholm, and 1987 was characterised by a very high student demand. Rosemary Clerihan became Co-ordinator, following Jill Andersons resignation, and until late May the section had to operate with only one other sessional staff member. From the end of May there were two additional staff members available for a total of four days per week. Margaret Scott, still on secondment from the School of Social and Behavioural Studies, represented the section on the Frankston campus.

It was a very pressured year for the section, but still just over 500 students were assisted with their academic literacy, oracy, and study skills. Most were helped through individual consultations, some through short courses and some by means of self-access materials.

Other academic staff have been increasingly willing to discuss and refer students individually and in groups. Language Development staff provided alternative tutorials for approximately 50 English as a Second Language Engineering students (ENG206) in second semester.

The major research work was the report on students enrolling for the first time at Chisholm in 1987. This was based on a questionnaire administered by the Educational Development Unit.

Media Services Section

The Section farewelled Robert ‘Nobby’ Clarke in March 1987 who retired after 12 years service at Chisholm. He was replaced by Mr Jeremy Gauder who is responsible for the provision of media services on the Frankston campus.

The original Hitachi video cameras, purchased in 1979 for the Caulfield Television Studio, and used for teaching Graphic Design and Communication Studies students became unserviceable and were disposed of. They have been replaced by Ikegami production cameras from the EDU. Major equipment acquired during the year included a FOR-A 450 P digital time base corrector with framestore and freeze frame capacity for video editing, a FOR-A VTV-400 video typewriter and an Ikegami 735 ENG video camera.

The level of service achieved in the previous year was maintained and complete refurbishment and expansion of the Caulfield Photographic studio and darkroom has increased capacity in the photographic area. A number of interesting video programs were undertaken and work commenced on publicity videotapes for the Schools of Nursing and Education.

A program for schools entitled ‘Aussie Sport Kit’- Table Tennis was commissioned by the Australian Table Tennis Association. The program ‘Integrating Disabled Children into Regular Schools’ produced by Joe Dora from the School of Education was launched by the Director, Dr Geoff Vaughan on October 28 at the Frankston campus.

The Library

Stabilisation of the Australian dollar exchange rate made 1987 a somewhat easier year for library management compared with 1986. This stabilisation, combined with the success of the Library's new formulary-guided approach to allocating acquisition funds, meant that the Library's collections could develop steadily, without the pressure for journal cancellations that marked the previous year.

Space available to the Library on the Frankston campus was substantially increased, and the Frankston Library's study, stack and discussion areas were made much more condu-
cive to reading, listening, viewing, discussion and computer use.

The Frankston Databank, which was developed and funded over 1986 and 1987 by CEP grants, was launched in November. The community information and local history databases of the Frankston Databank are now in regular use at the Frankston Citizens Advice Bureau, the Frankston City Library, and the City of Frankston Department of Community Services. Another CEP project was to develop a serial management database at the Caulfield campus library. The Library can now accurately attribute serials costs to specific academic areas of the Institute, and make projections of cost increases and monitor the price and delivery time of serials suppliers.

The SOUTHGUIDE Information Network continued to foster cooperation among libraries and information agencies of all types in the Westernport Region. The Institute Librarian participated in a number of consultative committees and working parties convened by the Ministry for the Arts, to review Victorian government policy on libraries.

A highly successful stock-take was conducted on both campuses during the December-January non-teaching period.

A new procedure introduced by the Associate Director and Registrar enabled the Information and Resource Librarians (IRLs) to regularly review documentation of academic program developments, and to propose amendments concerning implications for information resources. The Library assisted with discussions in the Higher Degrees and Research Committee and the Academic Board on the development of research and doctoral programs at Chisholm. Special document delivery arrangements and library seminars to support research effort were trialled in conjunction with the Faculty.

Students were educated in computerised catalogue, books, journals, audiovisual materials, and on-line information retrieval services and microcomputer systems. Under the Equal Opportunity Officer’s guidance the Library made steady progress with policies and procedures in the areas of affirmative action and service to students with disabilities.

The incidence of repetition strain injury in the Library was reduced due to the Institute’s funding of ergonomic furniture, redistribution of staff resources to lessen the pressure of work in affected sections, the use of fractional time appointments, and the education of staff about safe work methods both by the Institute and by VCSA.

The Library’s annual Corporate Planning Day involving all Library staff was once again highly successful. The Library’s internal committee system for the development and monitoring of Library policy operated well, with strong participation from all levels of staff.

The Library was given VFLSC and Institute approval for major equipment expenditure including a compactus stack, upgraded microcomputer and laser printing facilities for student word processing, and the first phase of a library computer system which may completely replace the Library’s ALIS system for public catalogues, lending, and acquisitions. A magnetic debit card system for photocopier use and other equipment for which fees are charged was installed.

The IBM-style microcomputer laboratories were in high demand.

Total Library expenditure from all sources rose from $1,595,374 in 1986 to $2,478,659 in 1987. Broken down by percentage (1986 in brackets) this figure comprised Salaries—64 per cent (65 per cent), Running Costs—seven per cent (six per cent), Acquisitions—24 per cent (26 per cent), and Equipment—five per cent (three per cent). The relative increase in the Equipment and Running Costs line item highlights the shift towards computer-based information systems with associated maintenance costs.

User activity at the Caulfield campus Library steadied but Frankston activity continued to grow. Despite a Caulfield decline on 1986 figures, activity was higher than in 1985. The overall pattern is satisfactory given that Caulfield student numbers declined with the departure of TAFE while Frankston student numbers grew.

There was a greater emphasis on multiple copy purchases of new monograph titles as the price of texts continued to rise beyond the means of many students. The Library received 2,987 journal titles in 1987 compared with 2,946 in 1986.

The major problems for the Library at the end of 1987 were a shortage of space at the Caulfield campus, and the on-going need to find ways of increasing the number of books and journal acquired each year to support research and educational programs.
Development Office

During the year the role of the Development Office broadened significantly, resulting from a pragmatic approach to critical operational issues confronting the Institute. Consequently, a number of important problems were addressed which led to further confusion over the precise role and nature of the office. In December, the Director received a report from the Development Manager canvassing a number of options. Direction on the focus of activities will result in the new year.

Operational assistance with the new tower building was arranged when Mr Wayne Brundell was transferred from the Premises Department to the Development Office late in 1987 to undertake the duties of Building Superintendent in a facility of combined Institute and commercial use. Miss Barbara Oostveen was appointed Personal Assistant to the Development Manager.

The Technology Tower/Student Union construction phase concluded late in the year and the design, fit-out and relocation of the Centre for the Development of Entrepreneurs, the International Business Centre, the Pearcey Centre for Computing and the Development Office was achieved by Christmas. The application for town planning permits, negotiations of commercial tenancies and the Student Union occupancy were major associated tasks of the project.

Close attention to the management of the Caulfield Plaza shopping centre resulted in improved rental returns and a more commercially satisfactory arrangement for recovery of tenant's outgoings. Two of the businesses were sold and a third was being negotiated in December. Assistance was given in disposing of an Institute leasehold on a shop at 4 Derby Road, formerly operated by the Student Union as Nature's Pantry.

Efforts were directed at having the Victorian Amateur Turf Club, the Caulfield City Council, Chisholm and other interested parties join together in developing plans for the development of Caulfield Station and environs. A formal working party was established to move through the initial stages of that process with an opportunity to address, and perhaps resolve some of the long standing problems and difficulties of the Caulfield Campus.

A major review of the operations of the Centres was undertaken by Messrs Ramlak and Farey and the Development Office provided them with research and administrative support. Significant support was supplied to the Centre for Robotics and Automation in obtaining further government funding support of $250,000 over the next three years. The Development Manager joined with members of the Advisory Board of the Centre for Business Technology and the Centre for the Development of Entrepreneurs in re-assessing their objectives and establishing new operational plans.

An Institute response was made to the Ministry of Education on the Victorian Government's proposed establishment of a state-wide, small business incubator network. It is hoped that a number of Chisholm Centres, Schools and Departments will participate in any future developments in this area.

Late in the year, Council adopted a policy of allowing recruitment and enrolment of full fee paying overseas students. As an interim arrangement, the Development Office has assumed responsibility for co-ordinating the marketing and recruitment of these students. While only a minor number of places were offered to full fee students in 1988 it is hoped that a considerable number of enrolments will be achieved in 1989 and beyond. Efforts are being directed not only at recruiting students from overseas, but also at recruiting them from the existing private secondary schools and the Victorian TAFE colleges who already have significant enrolments.

The Development Office acknowledges the valuable professional advice and support provided by consultants engaged for their expertise in specific areas such as legal, property, town planning and valuations and construction management.

Centre for Applied Mathematical Modelling

CAMM continued to show consistent growth in applied research and development with a number of new long term projects which build upon an existing strong base of continuing projects. The rapid growth in short term consulting activities continued, particularly in the area of regulatory air quality modelling.

Highlights for 1987 included:
- The successful application for a fourth NERDCC grant to conduct a national workshop entitled "Air Quality Modelling - Science and Application" during 1988.
- Continuing overseas support for CAMM's air quality modelling activities as exemplified by a further research contract with Air Resource Specialists Inc, Colorado, USA; and a new research contract with Colorado State University and the National Centre for Atmospheric Research.
- Further consolidation of CAMM as a major consultant in Victoria in regulatory air quality modelling as part of Schedule E of the State Environment Protection Policy (The Air Environment).
- The successful completion of a research program undertaken by Ms Li Litiquong (Kunming Institute of Technology, People's Republic of China). Ms Li's program was supported by CAMM and a Latrobe Valley Airshed Study Scholarship.
- The successful completion of the Co-operative Agreement between CAMM and the USDA, Forest Service.
- The joint presentation by CAMM and Trinity Consultants Inc (USA) of two air pollution dispersion modelling courses.

Researcher, Dr Bruce Hicks, Director, Atmospheric Turbulence and Diffusion Division, Environmental Research Laboratories, NOAA visit to CAMM provided the basis for cooperative links, including access by Dr Hicks' group to diagnostic wind field models developed by CAMM.

Centre for Business Technology

The year proved to be somewhat of a watershed for the Centre. The Advisory Board was very active.
throughout 1987 and initiated a re-assessment of the aims and objectives early in the year. A financial planning exercise was undertaken and the Directorate commenced a review of the Institute’s computing needs which was also to have some impact on the Centre’s scope of operations. As a consequence the pilot Office Automation project was terminated and the responsibility for maintenance and future development of the system was transferred to the Institute’s Computer Centre. It was agreed that for the immediate future, the Centre should concentrate activity on appropriate short course programs and consultancies to industry and commerce.

To support Tom Kopp, Executive Director, the Centre also appointed senior consultants Mr Richard Stevens and Ms Lynne Endscoot, and an Administrative Assistant, Miss Jenny Day. In July, Tom Kopp resigned his position to pursue activities with his own company, Leading Edge Technologies. Richard Stevens was appointed to the position of Executive Director on 1 August and resigned shortly afterwards, prior to travelling to the USA. Consequently, the Centre for Business Technology effectively ceased to operate in the second half of the year.

Under the guidance of Dr Geoffrey Vaughan, the members of the Advisory Board together with the Associate Director Planning & Resources, the Deans of the David Syme Business School and the Faculty of Technology and the Development Manager met regularly to consider options for the future direction of the Centre. In December, a new business plan prepared by Peter Chandler, was adopted and significant sponsorship by Shell Australia was reconfirmed for 1988 on the basis of that plan.

A new appointment will be sought early in 1988 who will work closely with the Dean of the David Syme Business School in establishing a Centre which could become a national focus for promoting an understanding and use of information technology for competitive edge.

Centre for the Development of Entrepreneurs

In 1987, the CDE completed a successful third year of operation, with a substantial increase in the number of entrepreneurship and intrapreneurship activities provided to the Australian population, expanded education and training activities and with a slight increase in the number of entrepreneurs and inventors assisted.

Forty courses and seminars were conducted by the CDE during the year for public or specific interest groups. More than 1,300 participants were contacted in CDE courses and seminars during the year. Highlights of the CDE’s training activities were ‘Graduate Enterprise’ (a program designed to assist new graduates from colleges and universities in the launch of ventures) and the New Enterprise Incentive Scheme. A further development was the expansion of entrepreneurship teaching within Chisholm. The CDE now teaches entrepreneurship in the following courses: the Craft stream of the Art & Design Course; the Graduate Diploma in Robotics and Digital Communication; the Bachelor of Business program (all streams); and the Bachelor of Applied Science (Computing).

The continuing developmental has been the interest shown by large Australian organisations and Government agencies in Intrapreneurship. During the year 24 different projects were undertaken by the CDE in which 907 executives or potential intrapreneurs were confronted with intrapreneurship concepts.

Staff of the CDE have continued to be sought after by many organisations for lectures on entrepreneurship, intrapreneurship, the work of the CDE, marketing, innovation and new venturing. The Executive Director of the Centre, Dr John Bailey, appeared on the television Quantum series ‘Last Chance for the Lucky Country’.

Centre for Industrial Tribology

The Centre is a joint venture between the various divisions within the Faculty of Technology. As such, it is one of the few interdisciplinary Centres within the Institute which has functioned successfully for the last six years. The Centre is presently attached to the Division of Engineering and Industrial Technology and managed by N. Di Toro from the Department of Mechanical and Industrial Engineering.

During 1987 the following industrial projects were undertaken by staff within the Centre:

- Investigation of turbine guide bearing wear for Tumut 3 power station - March (Snowy Mountain Hydro-Electric Authority);
- An assessment of tribological service needs of SECV Thermal power station - January (SECV of Victoria);
- Guidelines on lubrication selection - May (SECV of Victoria);
- In addition, a number of staff members within the Centre were involved in research including friction and wear of zirconia ceramics (ongoing); development of lubrication selection database for IBM-PC; and development of pin on disc wear testing facilities.

The Centre organised a seminar for maintenance engineers on Bearing, Lubrication and Mechanical Transmissions in October which attracted over 80 participants.

A number of staff members associated with the Centre organised an International Tribology Conference in December 1987. The four day conference attracted a large number of prominent overseas speakers and visitors.

Mr J. Butt, B.W. Barnard and N. Di Toro presented papers at the Bearing, Lubrication and Mechanical Transmissions seminar held at Chisholm in October 1987. In addition, staff members have given guest lectures to the Society of Tribologists and Lubrication Engineers (formerly ASLE) and oil companies such as Mobil Oil Australia and Applied Chemicals. Details of invited lectures are included in the Faculty’s report.

Two members of the Centre are in the executive committee of the Society of Tribologists and Lubrication Engineers (Australian Section), namely Mr R. Pugh (Chairman) and Mr N. Di Toro (Treasurer).
Centre for International Business

During 1987 the International Business Centre concentrated its activities on managing the Export Development Program, a major project funded by the State Government.

Under the program, executives from 23 Victorian-based companies undertook an intensive training program in international business, including a research visit of up to 28 days to targeted markets overseas, before compiling an export business plan for their organisations. New export markets worth in excess of $50 million were identified by program participants and the export activities of those companies have been significantly enhanced and improved.

The Program has been recognised as a good example of worthwhile and beneficial co-operation between government, industry and the education sectors working together to boost the state's export performance.

During the year, Dr John Onto, the Executive Director of the Centre, was appointed Director of the National Centre for Export/Import Studies at Guelph University in Washington and was succeeded by Mr Nigel Hamley.

Centre for Robotics and Automation

The Centre was heavily involved in consultancy with industry, particularly in the area of high-speed automation. This marked a change in direction for the Centre where staff applied their engineering expertise directly to industry.

Income for this period was approximately $65,000. The Centre has used available Government Incentives (especially the 150 per cent tax deduction concession for R&D) for the benefit of industry.

The Centre was notified late in 1987 that it is the recipient of a grant for $250,000 over three years from the National Industry Extension Scheme (NIES).

Chisholm Institute of Technology Engineering Research and Advisory Centre

CITERAC progressively increased its income over the period 1981-1986. In 1987 a sharp rise in income was experienced with improved prospects in 1988. CITERAC covers all Division of Engineering and Industrial Technology extraneous activity except that carried out in the Timber Centre and Industrial Tribology Centre.

In 1987 the major research activity was concrete testing for NATA requirements.

Chisholm Timber Engineering and Technology Centre

The Centre entered its third year of operation in 1987. The year was one of consolidation and development. The Centre was unable to replace its Executive Engineer and suffered an income reduction as a result. It has completed a year where it has operated with existing academic staff and part-time consultants. As a consequence of receiving major testing and research contracts in the latter part of 1987 it will reorganise and prepare a Development Plan in 1988.

In 1987 the following major activities were undertaken:
- Development of a conceptual and theoretical base for a hardwood stress grader.
- Clarification of the engineering properties of nailplated beams.
- Development of nailing techniques for plywood gusseted, hardwood glued laminated beam portal frames.
- Testing and advice on a range of glued and metal connected beams. Income to the Centre was $70,000. This income is expected to double in 1988.
- Mr Mark Ritchelar, an Auckland consulting engineer was a visitor to the Centre and leading speaker at a seminar on timber engineering design in New Zealand.

Peacock Centre for Computing

In 1987, the Peacock Centre created new records for income generation, number and variety of courses, and number of attendees.

Over $0.5 million came from educational and consultancy services; 2,007 people attended 128 courses on 47 different topics; the number of attendees taking Peacock Centre Evening Short Courses, (which may lead to the Certificate of Computing), reached 589 in second semester, breaking the previous semester record of 527. Five persons qualified for and received the Certificate of Computing, a number which will increase as more people undertake the optional assessment.

The Centre has achieved an average income growth rate of 23 per cent over the last three years.

In 1987, consultancy and/or course development projects were undertaken for the National Australia Bank; Department of Defence; Diamond Valley Shire Council; National Remuneration Centre; Department of Management and Budget; Melbourne and Metropolitan Board of Works; ANZ Banking Group; and the State Electricity Commission of Victoria. Hundreds more were assisted with free information and advice.

Three major seminars were conducted on Systems Analysis - Art or Science; Information Resource Management; and RDM's - A Technical Briefing. The high-profile of these one-day seminars attracted 159 attendees.

The South-East Asian market is proving difficult to break into. Two courses suffered late cancellation because of the host organisations difficulty in obtaining suitable hardware and software resources.

Future Centre planning will concentrate on more and diversified courses, both within the Division of Information Technology and within and outside of Chisholm. One such area is AutoCAD where this Centre was instrumental in obtaining Authorised AutoCAD Training Centre Status and is handling course administration.

Greater emphasis will be placed on selective consultancy, where a project is beneficial to the Centre and to the

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Components Pty Ltd in connection with a failure of oil filter components.

The Centre enjoyed the visit of Dr Iskender Yilgor, Research Director of Mercor Incorporated. Dr Yilgor is an expert in various applications of silica-containing polymers including the production of biologically compatible materials for use in artificial hearts and replacement blood vessels through to the production of 'breathable' fabrics for use in harsh conditions. While at the Centre, Dr Yilgor gave several lectures at Chisholm and at most of the major academic and research institutes. He also visited many industries with an interest in modified plastic materials.

Dr Chynoweth has substantially completed the work required for a PhD degree from Monash University, and Mr Boughdady will submit a Master's thesis early in 1988.

### Water Studies Centre

The Centre gained two major research grants totalling $334,000 from the Australian Water Research Advisory Council (AWRAC) during 1987. Both projects, one of the spiralling of nutrients (phosphorus and nitrogen) in streams, and the other studying the amount of timing of leaf material entering streams and the rate of breakdown of this material, will contribute to an increased knowledge of the functioning of Australian aquatic ecosystems.

The Centre undertook a considerable number of other research and consultancy programs during the year, particularly in the area of water quality investigations. These contributed approximately $70,000 to the Centre's budget. The Centre was successful in gaining AWRAC funding over the next three, and possibly five years, to establish a Centre of Concentration in Stream Ecology. The Centre for Stream Ecology will be a joint venture between the Water Studies Centre at Chisholm Institute, the Zoology Department at Monash University and the Department of Biological Surveys at the Museum of Victoria. Funding over the first three years will be approximately $450,000. Dr Barry T. Hart, current Director of the Water Studies Centre, will become full-time Director of the new Centre.

Following the successful agreement reached in 1985 with consulting company Analyspec Pty Ltd to provide modern atomic spectroscopic instruments, the Centre was fortunate in reaching agreement with another consulting company, Integrated Chromatographic Services Ltd, resulting in the Centre having available a wide range of organic analytical instruments, including capillary gas chromatographs, a gas chromatograph/mass spectrometer and a high pressure liquid chromatograph. As a result the Centre and the Department of Chemistry and Biology are now extremely well-equipped with modern analytical equipment.

In February 1987, the Centre organised a very successful international symposium on the Interactions between Sediments and Water. The symposium attracted almost 200 participants from 24 countries.

Dr Ron Beckett successfully obtained a prestigious US/Australia Bilateral Exchange Fellowship to spend two months at the University of Utah, undertaking collaborative research in Field Flow Fractionation. Dr Hart spent two weeks in the United States at the invitation of the New York Botanic Gardens, Institute of Ecology, where he attended a specialist workshop on 'Long-term Ecological Research' and visited a number of long-term research sites. Mr Tom Davies spent five weeks in the UK and Europe investigating the operation of Reed Beds for treating sewage effluents funded by the Mornington and Peninsula District Water Board. Dr Ian Campbell spent six months at James Cook University in Townsville investigating the life histories of aquatic insects as part of a professional experience program.
FACTS & FIGURES

Full-time/Part-time Mix

EFTS Student Enrolments

Male/Female Student Ratios

Enrolment by Campus—Caulfield

EFTS by Fields of Study

Enrolment by Campus—Frankston

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FACTS & FIGURES

Comparison of 1987 Enrolments

Staffing as at 30 April 1987

Academic Staff Full-time Equivalents

Non-Teaching Staff Full-time Equivalents

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## CHISHOLM COURSES 1987

<table>
<thead>
<tr>
<th>SCHOOL/ FACULTY</th>
<th>BACHELOR DEGREE</th>
<th>DIPLOMA</th>
<th>UNDERGRADUATE</th>
<th>POST-GRADUATE</th>
<th>POST-GRADUATE</th>
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<tbody>
<tr>
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<td>Ceramic Design</td>
<td>Graphic Design</td>
<td>Ceramic Design</td>
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<td>Fine Art</td>
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<td>Fine Art/Craft</td>
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<td>Graphic Communication</td>
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<td><strong>David Syme Business School</strong></td>
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<td>Marketing</td>
<td>Accounting Information Systems</td>
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<td>Administrative and Secretarial Studies</td>
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<td>Agricultural Studies</td>
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<td>Banking and Finance</td>
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<td>Logistics Management</td>
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<td>Office Administration</td>
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<td>Welfare Administration</td>
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<td>Arts</td>
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<td><strong>Social and Behavioural Studies</strong></td>
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<td>Police Studies</td>
<td>Welfare Studies</td>
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<tr>
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<td>Communication and Information Studies</td>
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<td>Arts/Business</td>
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<td>Applied Polymer Science</td>
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<td>Engineering (Electrical &amp; Computing)</td>
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<td>Engineering (Industrial &amp; Computing)</td>
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<td>Technology (Two-tier course)</td>
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</table>
PUBLICATIONS

The following is a list of published information by Institute staff for 1987, approved by the Higher Degrees and Research Committee of Chisholm Institute of Technology.

SCHOOL OF ART AND DESIGN

Articles in Refereed Journals


Articles and Reports


Books


Exhibitions and Commissions

BARTLETT G., Sculpture, Pinacotheca, Richmond, November.

BARTLETT G., Sculpture, Chase Company, Auckland New Zealand.

BARTLETT G., Sculpture, Marquette - Expo '88, Brisbane.

BELL J., Bronze Trophy, Made in Australia Design Award.

COUGH C., Painting, Christine Abrahams Gallery, Richmond, May.

ELLIOTT K., Student BA (Ceramic Design), Porcelain and Glass, Mural, Containers Ltd.

EMMERICK G., Architectural Glass, 160 Bourke Street, Melbourne; Stanlon and Theodore, Chapel Street, South Yarra; Wonthaggi Church of England.

NEESON J., Prints, Powell Street Galleries, South Yarra, May.

NEESON J., Prints, Tyrone Gallery, Adelaide, June.

SOPCOV C., Sculpture, Tamworth, NSW.

SOPCOV C., Marqueta, Caulfield City Council.

WILLIAMS G., Printings, Pinacotheca, Richmond, April 1987.

WOLMERING D., Sculpture, Caulfield City Council.

ZIMMER K., (Grad Dip), Architectural Glass, Prime Minister's Dining Room and Stairwells to Senate and House of Representatives, (New) Parliament House, Canberra.

Lectures and Conferences

BAK H., "Images of the World in a World of Images", INSEA Congress, Hamburg, West Germany, August.

WINGATE J., "Seventeenth Century Dutch Painting in the National Gallery of Victoria", to the Association of Guides, National Gallery of Victoria, October.


DAVID SYME BUSINESS SCHOOL

Articles


SARROS J., "Rusting out or burning out: causes and cures", Education Victoria, 269, 6, 1987.


Articles in Refereed Journals

TONGZON J., "The Australian Trade Preferences for Developing Countries - Effective or Ineffective?", ASEAN Economic Papers, Vol. 4.2.


Books


Broadcasts/Video


Lectures and Conferences


TONGSON J., “Financial Deregulation: What Have We Learned?”, 16th Conference of Economists, Surfers Paradise, Queensland, August.


Masters Theses


SCHOOL OF EDUCATION

Article


Articles in Refereed Journals


Books


Broadcasts/ Videos


Exhibitions


SCHOOL OF NURSING

Articles


Lectures and Conferences


ANGEIL D, Graduation Address, Dandenong and District Hospital, 8 October 1987.


SEYMOUR G, paper presented to Infection Control Group, Manly District Hospital, February 1987.

SCHOOL OF SOCIAL AND BEHAVIOURAL STUDIES

Articles in Refereed Journals


Articles and Reports


Books


Book Reviews

MCFARLANE B, “Portraits of the British Cinema” & “British

1987 Annual Report – 33
PUBLICATIONS

O’LOUGHLIN I.L., “Australia Through the Looking Glass” by Brenda Niall, Meridian, La Trobe University, Vol. 6, No. 1, 1987, pp. 56-60.

FACULTY OF TECHNOLOGY

Articles
ROSS D.G, AND SMITH L.N., “Diagnostic Wind Field Modelling, Development and Validation", Report to Department of Resources and Energy, National Energy Research and Development and Demonstration Program (Project No 837);

Articles in Refereed Journals
BAILEY P.C.E., “Abundance and age-specific spatial and temporal distribution in two water-bug species, Anisops deanii (Notonectidae) and Ranatra dispar (Nepidae) in three farm dams in South Australia", Oikos, 46, pp. 63-90.

Book Reviews

Books

Lectures and Conferences


DAVIES T.H., “Reed bed treatment of waste waters”, Symposium at the Biological Services Centre, Metropolitan Water & Sewerage & Drainage Board, Sydney, December.


DAVIS J.R., “Non-Destructive Testing using Computerised Tomography”, Meeting of American Society of Lubrication Engineers (Australian Section), Chisholm, 30 September.


DAVIS J.R., “Using Computers to get the Best Production from Sawmills”, 81st Annual General Meeting and Conference, NSW Forest Products Association, Sydney, 23 November.


DUVYESTYN C., “Mounting a preserve course in Nursing – a matter of compromise?”, Role of Biosciences in Health Science Education, School of Biological Sciences, Lincoln Institute of Health Sciences, Melbourne, December.


HART B.T., “Biogeochemical cycling of trace metals”, Monash University Chemical Society, April.

HART B.T., “Fate of trace metals and radionuclides in the Magela Creek system”, 9th RACI Analytical Chemistry Conference, Sydney, April.


HART B.T., “The future of research at Chisholm Institute – will we miss the boat?”, HRDC Research Seminar, Chisholm Institute, November.


LORIMER G.S., “Comparison of Different Models for Predicting SCE in the La Trobe Valley”, LVASS Modelling Seminar, 4 December.


WELLS P., "Developments in Diagnostic Imaging", the 4th National Plant Engineering and Maintenance Management Conference, Sydney, 7-9 April, Melbourne, 28-30 April.

WELLS P., "The Role of Computed Tomography in NDT", Institute of Metals and Materials Australasia, Melbourne, 10 September.


Masters by Research and Doctoral Degrees


JONES M., MAppSci "The development of methods to measure the complexing capacity of natural waters and their application to Magela Creek waters", Chisholm Institute of Technology.

KENNEDY R.D., PhD "An Audit Methodology for a Resource Based Productivity Planning System", West Virginia University, 1987.

MACMILLAN L., MAppSci "Assessing the nature conservation value of rivers and streams with particular reference to the rivers of East Gippsland", Chisholm Institute of Technology.


Masters by Coursework

EVANS J., MAppSci (by coursework) "Information systems planning: Its importance and essential integration into computing strategic plans in a Victorian hospital", Chisholm Institute of Technology.

MOORE L.M., MAppSci (by coursework) "A method of stabilising the requirements specification in certain classes of systems", Chisholm Institute of Technology.

Technical Reports


EDUCATIONAL DEVELOPMENT UNIT

Articles

CLERihan R., Tolerance in Emmar. or Why did Mrs Woodhouse marry Mr Woodhouse"? Viewpoints, 86, pp 119.


library

Books


Conferences and Lectures


SCHAUER D., "Research in librarianship and information services: the scope for innovation and inquiry in Australia", Graduates' Research and Innovation Update, sponsored by the Alumni Association of the Graduate School of Librarianship, Monash University, 17 October 1987.
Thesis

CENTRE FOR ROBOTICS AND AUTOMATION
Lectures and Conferences

CENTRE FOR THE DEVELOPMENT OF ENTREPRENEURS
Books
Lectures and Conferences

POLYMER RESEARCH CENTRE
Articles in Refereed Journals
CHISHOLM INSTITUTE OF TECHNOLOGY

CERTIFICATION OF ANNUAL FINANCIAL STATEMENTS

FOR YEAR ENDED 31 DECEMBER 1987

In our opinion the accompanying Annual Financial Statements of the Chisholm Institute of Technology, comprising the Statement of Assets and Liabilities, Summary Statement of Income and Expenditure, Statement of Sources and Applications of Funds together with the detailed supporting statements and accompanying notes which form part of the Annual Financial Statements have been drawn up so as to show fairly the financial affairs of the Institute and its activities for the year ended 31 December, 1987.

As the audit of the Annual Financial Statement has not been completed at the date of printing, the above certification has not been signed by the Officers of the Institute.

President of Council / 1988

Director of the Institute / 1988

Chief Finance Manager / 1988
### CHISHOLM INSTITUTE OF TECHNOLOGY

**Statement of Assets and Liabilities as at 31 December 1987**

#### ACCUMULATED FUNDS

<table>
<thead>
<tr>
<th>Note</th>
<th>1987</th>
<th>1986</th>
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<tr>
<td></td>
<td>$000</td>
<td>$000</td>
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<tr>
<td>Recurrent Grant Account</td>
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<td>(691)</td>
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<tr>
<td>Capital Grant Accounts</td>
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<td>1,013</td>
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<td>Extraneous Account</td>
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<td>Equity Managed on behalf of the Crown</td>
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<td>Asset Revaluation Reserve</td>
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<td>4,800</td>
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<td><strong>Total Accumulated Funds</strong></td>
<td><strong>96,824</strong></td>
<td><strong>10,114</strong></td>
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**Represented By:**

#### CURRENT ASSETS

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<tr>
<th>Description</th>
<th>1987</th>
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<td></td>
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<tr>
<td>Bank Accounts and Cash Balances</td>
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<td>56</td>
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<td>Debtor's and Prepayments</td>
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<td>1824</td>
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<td>Investments</td>
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<td>6,993</td>
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<tr>
<td>Inventories</td>
<td>183</td>
<td>153</td>
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<tr>
<td><strong>Total Current Assets</strong></td>
<td><strong>10,028</strong></td>
<td><strong>9,026</strong></td>
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#### NON-CURRENT ASSETS

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<tr>
<td>Long Term Investments</td>
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<td>Land - owned by Institute</td>
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<td>Land - vested in the Crown</td>
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<td>Buildings - owned by Institute</td>
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<td>Buildings - vested in the Crown</td>
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<td>Other Fixed Assets</td>
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<td>1,652</td>
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<td><strong>Total Non-Current Assets</strong></td>
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<td><strong>14,040</strong></td>
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<td><strong>Total Assets</strong></td>
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<td><strong>23,066</strong></td>
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#### LESS CURRENT LIABILITIES

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<td>Creditors and Accruals</td>
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<td>Repaid Tertiary Education</td>
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<td>Assistance Grants</td>
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<td>Student Fees Received in Advance</td>
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<td>90</td>
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<td>Provision for Long Service Leave</td>
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<td><strong>Total Current Liabilities</strong></td>
<td><strong>9,263</strong></td>
<td><strong>10,433</strong></td>
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#### NON-CURRENT LIABILITIES

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<tr>
<td>Commercial Borrowings</td>
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<td><strong>Total Liabilities</strong></td>
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<td><strong>12,952</strong></td>
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<td><strong>NET ASSETS</strong></td>
<td><strong>96,824</strong></td>
<td><strong>10,114</strong></td>
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The above Statement of Assets and Liabilities should be read in conjunction with the notes to and forming part of the financial statements.
CHISHOLM INSTITUTE OF TECHNOLOGY
CONSOLIDATED STATEMENT OF INCOME AND EXPENDITURE FOR YEAR ENDED 31 DECEMBER 1987

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<tr>
<th>Recurrent</th>
<th>Equipment</th>
<th>Minor Works</th>
<th>Major Works</th>
<th>Extraneous</th>
<th>Eliminations</th>
<th>Total 1987</th>
<th>Total 1986</th>
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<tr>
<td>$000</td>
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<td>$000</td>
<td>$000</td>
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**Income**

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<th>Major Works</th>
<th>Extraneous</th>
<th>Eliminations</th>
<th>Total 1987</th>
<th>Total 1986</th>
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<td>Higher Education Charge</td>
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<td>Tertiary Education</td>
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<td>5,944</td>
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<td>Grants Received</td>
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<td>2,934</td>
<td>2,167</td>
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<td>Fees for Short Courses etc</td>
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<td>837</td>
<td>1,117</td>
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<td>837</td>
<td>1,117</td>
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<td>Interest on Investments</td>
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<td>2,971</td>
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<td>Rental income</td>
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<td>576</td>
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<td>Printing Income</td>
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<td>Catering Income</td>
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<td>Other income</td>
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<td>Premises - Internal</td>
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<td>Maintenance</td>
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<td>Internal Equipment Funds</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Total Income</td>
<td>34,884</td>
<td>1409</td>
<td>946</td>
<td>5,944</td>
<td>8,501</td>
<td></td>
<td>48,289</td>
<td>39,373</td>
</tr>
</tbody>
</table>

**Expenditure**

<table>
<thead>
<tr>
<th>Description</th>
<th>Recurrent</th>
<th>Equipment</th>
<th>Minor Works</th>
<th>Major Works</th>
<th>Extraneous</th>
<th>Eliminations</th>
<th>Total 1987</th>
<th>Total 1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries</td>
<td>23,323</td>
<td>22,266</td>
<td></td>
<td>25,549</td>
<td>24,169</td>
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<tr>
<td>Practice Teaching Fees</td>
<td>211</td>
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<td></td>
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<td>211</td>
<td>154</td>
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<td>Payroll Tax</td>
<td>150</td>
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</tr>
<tr>
<td>Accident Compensation - Levy</td>
<td>230</td>
<td>265</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>265</td>
<td>266</td>
</tr>
<tr>
<td>Superannuation Contributions</td>
<td>42</td>
<td>2,520</td>
<td>1,906</td>
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<td></td>
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<tr>
<td>Occupancy Charges</td>
<td>2,251</td>
<td>102</td>
<td>(2,251)</td>
<td>1,012</td>
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<tr>
<td>Maintenance - Building &amp; Equipment</td>
<td>755</td>
<td>479</td>
<td>(130)</td>
<td>1,104</td>
<td>1,138</td>
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<tr>
<td>Light/Fuel &amp; Power</td>
<td>619</td>
<td>619</td>
<td></td>
<td></td>
<td>543</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Cleaning</td>
<td>551</td>
<td>551</td>
<td></td>
<td></td>
<td>675</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Library Acquisitions</td>
<td>462</td>
<td></td>
<td></td>
<td>462</td>
<td>675</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Equipment Purchases</td>
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<td>1,487</td>
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<tr>
<td>Furniture</td>
<td>146</td>
<td>21</td>
<td></td>
<td>167</td>
<td>157</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Telephone &amp; Postage</td>
<td>357</td>
<td>43</td>
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<td>400</td>
<td>363</td>
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<tr>
<td>Printing Charges and Materials</td>
<td>397</td>
<td>236</td>
<td>(414)</td>
<td>218</td>
<td>266</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Staff Development</td>
<td>220</td>
<td>370</td>
<td></td>
<td>590</td>
<td>721</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Catering Materials</td>
<td>336</td>
<td>336</td>
<td></td>
<td>396</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Expenditure</td>
<td>1,849</td>
<td>1,485</td>
<td></td>
<td>3,334</td>
<td>3,088</td>
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<td>Building Projects</td>
<td>5,981</td>
<td>6,270</td>
<td>1,227</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation on Equipment</td>
<td>198</td>
<td>198</td>
<td></td>
<td>169</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long Service Leave Provision</td>
<td>(1)</td>
<td>(1)</td>
<td></td>
<td>(1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Expenditure</td>
<td>34,442</td>
<td>1,253</td>
<td>289</td>
<td>5,981</td>
<td>6,946</td>
<td>(2,795)</td>
<td>46,116</td>
<td>36,679</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Recurrent</th>
<th>Equipment</th>
<th>Minor Works</th>
<th>Major Works</th>
<th>Extraneous</th>
<th>Eliminations</th>
<th>Total 1987</th>
<th>Total 1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surplus (Deficit) Year</td>
<td>442</td>
<td>156</td>
<td>57</td>
<td>(37)</td>
<td>1,555</td>
<td></td>
<td>2,173</td>
<td>484</td>
</tr>
<tr>
<td>Accumulated Surplus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Deficit) 1 January</td>
<td>(691)</td>
<td>46</td>
<td>3</td>
<td>(1)</td>
<td>9,782</td>
<td></td>
<td>9,149</td>
<td>8,655</td>
</tr>
<tr>
<td>Prior Year adjustments</td>
<td>128</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>128</td>
<td></td>
</tr>
<tr>
<td>Accumulated Surplus/ (Deficit) 31 December</td>
<td>(249)</td>
<td>202</td>
<td>60</td>
<td>(38)</td>
<td>11,475</td>
<td></td>
<td>11,450</td>
<td>9,149</td>
</tr>
</tbody>
</table>

The above statement of consolidated income and expenditure should be read in conjunction with the notes to and forming part of the financial statements.

40—1987 Annual Report
CHISHOLM INSTITUTE OF TECHNOLOGY
Statement of Sources and Application of Funds
For the Year Ended 31 December, 1987

<table>
<thead>
<tr>
<th>Note</th>
<th>1987 $000</th>
<th>1986 $000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SOURCES OF FUNDS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funds from Operations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surplus for year</td>
<td>2,173</td>
<td>494</td>
</tr>
<tr>
<td>Add back non-cash items</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Prov’n for Employees Liabilities</td>
<td>(1)</td>
<td>90</td>
</tr>
<tr>
<td>- Prov’n for Depreciation</td>
<td>156</td>
<td>169</td>
</tr>
<tr>
<td>Funds from Operations</td>
<td>2,370</td>
<td>753</td>
</tr>
<tr>
<td>Capital Grants Accounts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contributions from Student Union to Tower Building Project</td>
<td>460</td>
<td>468</td>
</tr>
<tr>
<td>Reductions in Assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventories</td>
<td>.</td>
<td>70</td>
</tr>
<tr>
<td>Debtors and Prepayments</td>
<td>499</td>
<td>48</td>
</tr>
<tr>
<td>Investments</td>
<td>.</td>
<td>4,130</td>
</tr>
<tr>
<td></td>
<td>499</td>
<td>4,248</td>
</tr>
<tr>
<td>Increase in Liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepaid Tertiary Education Assistance Grants</td>
<td>138</td>
<td>3,631</td>
</tr>
<tr>
<td>Creditors and Accruals</td>
<td>337</td>
<td>903</td>
</tr>
<tr>
<td>Student fees received in advance</td>
<td>535</td>
<td>4,534</td>
</tr>
<tr>
<td>Non Current Liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial Borrowings</td>
<td>5,461</td>
<td>2,519</td>
</tr>
<tr>
<td><strong>TOTAL SOURCES OF FUNDS</strong></td>
<td>9,345</td>
<td>12,542</td>
</tr>
</tbody>
</table>

| **APPLICATION OF FUNDS** | | |
| Increases in Assets | | |
| Current Assets | | |
| Investments | 1,342 | 1,594 |
| Bank Accounts and Cash Balances | 181 | 1,594 |
| Inventories | 30 | |
| S.E.C. Security Deposit | 2 | 2 |
| | 1,555 | 1,596 |
| Non-Current Assets | | |
| Long Term Investments | 40 | 71 |
| Land and Buildings | 5,554 | 8,467 |
| Equipment | 307 | 314 |
| Motor Vehicles | 105 | 3 |
| Furniture | | 7 |
| | 6,098 | 8,802 |
| Reduction in Liabilities | | |
| Current Liabilities | | |
| Creditors and accruals | 1,704 | 2,144 |
| Prepaid Tertiary Education Assistance Grants | | 2,144 |
| | 1,704 | |
| **TOTAL APPLICATION OF FUNDS** | 9,345 | 12,542 |

The above Statement of Sources and Applications of Funds should be read in conjunction with the notes to and forming part of the financial statements.
### ANNUAL FINANCIAL STATEMENTS

#### CHISHOLM INSTITUTE OF TECHNOLOGY

### RECURRENT GRANT ACCOUNT

**Statement of Income and Expenditure**  
For the Year Ended 31 December 1987

<table>
<thead>
<tr>
<th>1987</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>$000</td>
<td>$000</td>
</tr>
</tbody>
</table>

#### INCOME

<table>
<thead>
<tr>
<th>Description</th>
<th>1987</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tertiary Education Grants Received</td>
<td>30,264</td>
<td>30,814</td>
</tr>
<tr>
<td>• CTEC State Grant (Tertiary Education Assistance)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Victorian State Grants</td>
<td>1,240</td>
<td></td>
</tr>
<tr>
<td>Additional Tertiary Places</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Victorian Nurses Education Grant</td>
<td>566</td>
<td></td>
</tr>
<tr>
<td>• Commonwealth Nurses Develop.Grant</td>
<td>163</td>
<td></td>
</tr>
<tr>
<td>• Commonwealth Nurses Education Transfer Grant</td>
<td>228</td>
<td></td>
</tr>
<tr>
<td>• Higher Education Charge</td>
<td>1,883</td>
<td></td>
</tr>
<tr>
<td>Other Income</td>
<td>215</td>
<td>60</td>
</tr>
<tr>
<td>Printing Income - Internal</td>
<td>325</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL INCOME:</strong></td>
<td><strong>34,884</strong></td>
<td><strong>30,874</strong></td>
</tr>
</tbody>
</table>

#### EXPENDITURE

<table>
<thead>
<tr>
<th>Description</th>
<th>1987</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries</td>
<td>23,323</td>
<td>21,663</td>
</tr>
<tr>
<td>Practice Teaching Fees</td>
<td>211</td>
<td>154</td>
</tr>
<tr>
<td>Payroll Tax</td>
<td>1,307</td>
<td>1,210</td>
</tr>
<tr>
<td>Accident Compensation Levy</td>
<td>230</td>
<td>208</td>
</tr>
<tr>
<td>Superannuation Contributions</td>
<td>2,578</td>
<td>1,692</td>
</tr>
<tr>
<td>Occupancy Charges</td>
<td>2,251</td>
<td>1,643</td>
</tr>
<tr>
<td>Maintenance - Buildings and Equipment</td>
<td>755</td>
<td>769</td>
</tr>
<tr>
<td>Library Acquisitions</td>
<td>462</td>
<td>678</td>
</tr>
<tr>
<td>Equipment</td>
<td>355</td>
<td>450</td>
</tr>
<tr>
<td>Furniture</td>
<td>146</td>
<td>140</td>
</tr>
<tr>
<td>Telephone &amp; Postage</td>
<td>397</td>
<td>257</td>
</tr>
<tr>
<td>Printing Charges/Materials</td>
<td>220</td>
<td>384</td>
</tr>
<tr>
<td>Staff Development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Expenditure</td>
<td>1,849</td>
<td>1,432</td>
</tr>
<tr>
<td><strong>Total Expenditure</strong></td>
<td><strong>34,442</strong></td>
<td><strong>31,245</strong></td>
</tr>
<tr>
<td>Surplus/(Deficit) for year</td>
<td>442</td>
<td>(371)</td>
</tr>
<tr>
<td>Accumulated Surplus (Deficit) 1 January</td>
<td>(691)</td>
<td>(320)</td>
</tr>
<tr>
<td>Accumulated Surplus (Deficit) 31 December</td>
<td>(249)</td>
<td>(691)</td>
</tr>
</tbody>
</table>

#### EQUIPMENT GRANT ACCOUNT

**Statement of Income and Expenditure**  
For the Year Ended 31 December 1987

<table>
<thead>
<tr>
<th>1987</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>$000</td>
<td>$000</td>
</tr>
</tbody>
</table>

#### INCOME

<table>
<thead>
<tr>
<th>Description</th>
<th>1987</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tertiary Education Grant Received</td>
<td>1,293</td>
<td>910</td>
</tr>
<tr>
<td>Internal Equipment Funds</td>
<td>116</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL INCOME</strong></td>
<td><strong>1,409</strong></td>
<td><strong>910</strong></td>
</tr>
</tbody>
</table>

#### EXPENDITURE

<table>
<thead>
<tr>
<th>Description</th>
<th>1987</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment Purchases</td>
<td>1,253</td>
<td>1,001</td>
</tr>
<tr>
<td><strong>Surplus/(Deficit) for year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accumulated Surplus 1 January</td>
<td>156</td>
<td>(91)</td>
</tr>
<tr>
<td>Accumulated Surplus 31 December</td>
<td>202</td>
<td>46</td>
</tr>
</tbody>
</table>

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### CHISHOLM INSTITUTE OF TECHNOLOGY
#### MINOR WORKS GRANT ACCOUNT
Statement of Income and Expenditure
For the Year Ended 31 December 1987

<table>
<thead>
<tr>
<th>INCOME</th>
<th>1987 $000</th>
<th>1986 $000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tertiary Education Grant Received</td>
<td>346</td>
<td>260</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>EXPENDITURE</th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor Buildings Projects</td>
<td>289</td>
<td>257</td>
</tr>
<tr>
<td>Surplus for year</td>
<td>57</td>
<td>3</td>
</tr>
<tr>
<td>Accumulated Surplus 1 January</td>
<td>3</td>
<td>.</td>
</tr>
<tr>
<td>Accumulated Surplus - 31 December</td>
<td>60</td>
<td>3</td>
</tr>
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</table>

### CHISHOLM INSTITUTE OF TECHNOLOGY
#### MAJOR WORKS GRANT ACCOUNT
Statement of Income and Expenditure
For the Year Ended 31 December 1987

<table>
<thead>
<tr>
<th>INCOME</th>
<th>1987 $000</th>
<th>1986 $000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tertiary Education Grant Received</td>
<td>5,944</td>
<td>970</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXPENDITURE</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Buildings Projects</td>
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<td>970</td>
</tr>
<tr>
<td>Surplus/(Deficit) for year</td>
<td>(37)</td>
<td>.</td>
</tr>
<tr>
<td>Accumulated Surplus/(Deficit) 1 January</td>
<td>(1)</td>
<td>(1)</td>
</tr>
<tr>
<td>Accumulated Surplus/(Deficit) 31 December</td>
<td>(38)</td>
<td>(1)</td>
</tr>
</tbody>
</table>
CHISHOLM INSTITUTE OF TECHNOLOGY
EXTRANEOUS FUNDS ACCOUNTS

Statement of Income & Expenditure
For the Year Ended 31 December 1987

<table>
<thead>
<tr>
<th>Note</th>
<th>1987 000</th>
<th>1986 000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INCOME</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tertiary Education Grants Received:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Student Residences</td>
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<td>6</td>
</tr>
<tr>
<td>- Needy Students</td>
<td>.</td>
<td>16</td>
</tr>
<tr>
<td>Research Grants</td>
<td>592</td>
<td>938</td>
</tr>
<tr>
<td>Fees for Short Courses, Consultancy etc., Interest on Investments</td>
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<td></td>
</tr>
<tr>
<td>- Internal</td>
<td>2,304</td>
<td>2,167</td>
</tr>
<tr>
<td>- Caulfield Plaza</td>
<td>478</td>
<td>539</td>
</tr>
<tr>
<td>- Student Residences</td>
<td>211</td>
<td>162</td>
</tr>
<tr>
<td>- Other</td>
<td>.</td>
<td>218</td>
</tr>
<tr>
<td>Printing Income</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>- Internal</td>
<td>88</td>
<td>367</td>
</tr>
<tr>
<td>- External</td>
<td>228</td>
<td>182</td>
</tr>
<tr>
<td>Catering Income</td>
<td>576</td>
<td>651</td>
</tr>
<tr>
<td>Other Income</td>
<td>239</td>
<td>221</td>
</tr>
<tr>
<td>Premises - Internal Maintenance Income</td>
<td>130</td>
<td>358</td>
</tr>
<tr>
<td>Internal Equipment Funds (120)</td>
<td>(120)</td>
<td>.</td>
</tr>
<tr>
<td><strong>EXPENDITURE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries</td>
<td>2,226</td>
<td>2,475</td>
</tr>
<tr>
<td>Payroll tax</td>
<td>150</td>
<td>164</td>
</tr>
<tr>
<td>Accident Compensation Levy</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>Superannuation Contributions</td>
<td>42</td>
<td>14</td>
</tr>
<tr>
<td>Occupancy Charges</td>
<td>102</td>
<td>72</td>
</tr>
<tr>
<td>Maintenance and Repairs</td>
<td>479</td>
<td>667</td>
</tr>
<tr>
<td>Light, Fuel and Power</td>
<td>619</td>
<td>543</td>
</tr>
<tr>
<td>Cleaning</td>
<td>591</td>
<td>675</td>
</tr>
<tr>
<td>Equipment Purchases</td>
<td>25</td>
<td>37</td>
</tr>
<tr>
<td>Furniture</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td>Telephone and Postage</td>
<td>43</td>
<td>56</td>
</tr>
<tr>
<td>Printing Charges/Materials</td>
<td>236</td>
<td>368</td>
</tr>
<tr>
<td>Catering Materials</td>
<td>336</td>
<td>366</td>
</tr>
<tr>
<td>Staff Development</td>
<td>370</td>
<td>337</td>
</tr>
<tr>
<td>Other Expenditure</td>
<td>1,485</td>
<td>1,636</td>
</tr>
<tr>
<td>Depreciation of Equipment</td>
<td>158</td>
<td>109</td>
</tr>
<tr>
<td>Provision for Long Service Leave</td>
<td>(1)</td>
<td>90</td>
</tr>
<tr>
<td><strong>Surplus for year</strong></td>
<td>6,946</td>
<td>7,774</td>
</tr>
<tr>
<td><strong>Accumulated Surplus 1 January</strong></td>
<td>1555</td>
<td>963</td>
</tr>
<tr>
<td><strong>Prior period adjustment for Purchase Cost of Motor Vehicles included as expenditure in previous years</strong></td>
<td>9,732</td>
<td>8,603</td>
</tr>
<tr>
<td><strong>Accumulated Surplus 31 December</strong></td>
<td>11,475</td>
<td>9,732</td>
</tr>
</tbody>
</table>
1. Legal Status and Nature of Activities
   i) The Council of the Chisholm Institute of Technology is a body corporate established under an Order in Council pursuant to section 29 of the Post-Secondary Education Act 1978, and gazetted on 3 March 1982.
   ii) The Institute is responsible to the State Minister for Education through the Victorian Post Secondary Education Commission.

2. Statement of Principal Accounting Policies
   The purpose of this statement is to disclose information relating to the Institute's accounting policies and changes in accounting treatment where such matters are material to the financial statements.
   a) Accounting Basis
      The Annual Financial Statements have been prepared on a historical cost basis in accordance with Australian Accounting Standards using accrual accounting except for the recognition of the accumulated value of liabilities for annual and long service leave disclosed at note 11, and the revaluation of land and buildings disclosed at note 20(a).
   b) Format of Statements
      a) The statements are presented in a format consistent with the requirements of the Post Secondary Education Act 1978.
      b) Income and expenditure is accounted for on a specific funds basis under the headings of Recurrent, Equipment Grants, Minor Works Grants and Extraneous. The Consolidated Statement of Income and Expenditure summarises all financial transactions occurring under each of these headings. The detailed supporting statements elaborate on the categories of income and expenditure and provide comparative figures for the previous year.
      c) In preparing the statements all internal transactions have been eliminated.
   c) Changes in Accounting Policy
      a) Valuation and Disclosure of Land and Buildings.
         The Council of the Institute is responsible for the stewardship of land and buildings vested in the Crown which are used by the Institute for the purposes contained in the Order in Council dated 2 March 1982, that constituted the Council of the Chisholm Institute of Technology. The value of such land and buildings has not previously been reported and in order to properly reflect the Institute's stewardship of these assets, they have, together with land and buildings owned by the Institute, been valued in December 1982 by Mr M A Holland a registered valuer from A T Cocks & Partners Pty, Ltd.
         The land and buildings vested in the Crown have been shown as non-current assets offset as equity managed on behalf of the Crown under accumulated funds.
         The difference between the cost of land and buildings owned by the Institute including investment property, and the revaluation thereof is reflected in the Asset Revaluation Reserve.
         No comparative figures for 1986 are available for these items.
      b) Motor vehicles purchased from extraneous funds but used for recurrent purposes are no longer expensed in the year of acquisition. All such vehicles have been shown as fixed assets.
      c) During 1987 the Institute opened a United States Dollar bank account to facilitate payment of goods and services invoiced in that currency.
   d) Asset Purchases and Amortisation Thereof
      a) Assets purchased from Recurrent, Equipment, Major Works and Minor Works grants are not capitalised but charged at the time of acquisition as expenditure against the relevant grant from which the asset was purchased.
      b) Assets purchased from Extraneous funds are capitalised and with the exception of motor vehicles amortised over a working life of ten years.
         Motor vehicles are replaced every two years or 40,000 kilometres whichever occurs first. The Institute is exempt from payment of sales tax on vehicles purchased and as it is normal to recoup the original purchase cost on disposal the amortisation of motor vehicles is not considered appropriate.
   e) Taxation
      The Institute is not subject to income tax or sales tax but is liable to other taxes in accordance with Federal and State legislation.
   f) Terms and Conditions of Employment
      Terms and conditions of employment with the Institute are determined in accordance with the provisions of the Post Secondary Education Act 1978 and such other Acts as applicable to the Institute from time to time.
   g) Superannuation
      No provision has been made for the future pension costs of former employees who are members of the Victorian State Superannuation Scheme. Such costs are accounted for as and when they become due for payment. The Institute is subject to the terms and conditions of the Victorian State Superannuation Scheme. The additional funding by way of supplementations relates to costs beyond those incurred in 1981.
      During the financial year supplementation amounting to $935,000 was allocated (1986 $599,000).
   h) Inventories
      Inventories on hand consist of consumable items used in the normal course of business. These inventories are valued at the lower of cost or net realisable value using both first in, first out and average cost as appropriate.
### 3. CAPITAL GRANT ACCOUNTS

<table>
<thead>
<tr>
<th></th>
<th>1987</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Development Fund</td>
<td>1,425</td>
<td>965</td>
</tr>
<tr>
<td>Balance of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment Grants</td>
<td>202</td>
<td>46</td>
</tr>
<tr>
<td>Minor Works</td>
<td>60</td>
<td>3</td>
</tr>
<tr>
<td>Major Works</td>
<td>(38)</td>
<td>(1)</td>
</tr>
<tr>
<td></td>
<td>1,649</td>
<td>1,013</td>
</tr>
</tbody>
</table>

Student Union facilities on the Caulfield Campus were partially financed by progressive contributions from the Student Union to a building development fund in an agreed total of $1,425,000.00. Following the completion of the facility and the signing of an occupancy agreement between the Institute and the Student Union the building development fund was transferred from Current Liabilities to the accumulated Capital Grant Accounts.

### 4. DEBTORS AND PREPAYMENTS

<table>
<thead>
<tr>
<th></th>
<th>1987</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grants Receivable</td>
<td>263</td>
<td>571</td>
</tr>
<tr>
<td>Prepaid Salaries</td>
<td>174</td>
<td>656</td>
</tr>
<tr>
<td>Other Prepayments</td>
<td>243</td>
<td>70</td>
</tr>
<tr>
<td>Sundry Debtors</td>
<td>428</td>
<td>451</td>
</tr>
<tr>
<td>Accrued Interest on Investments</td>
<td>76</td>
<td>77</td>
</tr>
<tr>
<td>Loans to Students</td>
<td>141</td>
<td>57</td>
</tr>
<tr>
<td>Loan Student Union</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1,385</td>
<td>1,884</td>
</tr>
<tr>
<td>Less: General provision for Doubtful Debts</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>1,325</td>
<td>1,824</td>
</tr>
</tbody>
</table>

### 5. INVESTMENTS

All investments are made in accordance with Section 4 of the Victorian Trustees Act 1958 and are stated at cost.

The balance consists of:

<table>
<thead>
<tr>
<th></th>
<th>1987</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term Deposits</td>
<td>8,332</td>
<td>6,990</td>
</tr>
<tr>
<td>Other Authorised Investments</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>State Electricity Commission Security Deposit</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>8,337</td>
<td>6,993</td>
</tr>
</tbody>
</table>

### 6. LONG TERM INVESTMENTS

<table>
<thead>
<tr>
<th></th>
<th>1987</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Electricity Commission Security Deposit</td>
<td>70</td>
<td>71</td>
</tr>
<tr>
<td>Investment Property</td>
<td>4,000</td>
<td>2,409</td>
</tr>
<tr>
<td>Loan - Petrelray Pty Ltd</td>
<td>41</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>4,111</td>
<td>2,480</td>
</tr>
</tbody>
</table>

The State Electricity Commission required a security deposit to be lodged in connection with the Technology Tower project. This deposit is refundable with interest over 10 years following occupation of the building.

The investment property is shown at the December 1987 valuation figure. The difference between the valuation and cost of the investment has been transferred to the Asset Revaluation Reserve - Refer Note 2(i)(a).

The institute acquired on 28 November 1986 shares in a shelf company - Petrelray Pty Ltd to be used as the vehicle for management of the Technology Tower project which became operational in 1987. The investment in this company is represented by 2,100 shares held in trust for the Institute, the value of which has been eliminated due to rounding to the nearest thousand dollars.
7. OTHER FIXED ASSETS

Valued at Cost

<table>
<thead>
<tr>
<th></th>
<th>1987</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>000</td>
<td>000</td>
</tr>
<tr>
<td>The balance consists of:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor Vehicles</td>
<td>352</td>
<td>119</td>
</tr>
<tr>
<td>Equipment</td>
<td>2,290</td>
<td>1,843</td>
</tr>
<tr>
<td>Less: Provision for Depreciation</td>
<td>515</td>
<td>317</td>
</tr>
<tr>
<td></td>
<td>1,775</td>
<td>1,526</td>
</tr>
<tr>
<td>Fixtures and Fittings</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>2,082</td>
<td>1,653</td>
</tr>
</tbody>
</table>

8. CREDITORS AND ACCRUALS

The balance consists of

<table>
<thead>
<tr>
<th></th>
<th>1987</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>000</td>
<td>000</td>
</tr>
<tr>
<td>Other Creditors</td>
<td>2,812</td>
<td>3,300</td>
</tr>
<tr>
<td>John Holland Constructions Pty Ltd</td>
<td>.</td>
<td>1,013</td>
</tr>
<tr>
<td>Refundable Deposits</td>
<td>49</td>
<td>52</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2,661</td>
<td>4,365</td>
</tr>
</tbody>
</table>

9. PROVISION FOR LONG SERVICE LEAVE

<table>
<thead>
<tr>
<th></th>
<th>1987</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>000</td>
<td>000</td>
</tr>
<tr>
<td>Balance 1 January</td>
<td>90</td>
<td>.</td>
</tr>
<tr>
<td>Amount Transferred from Statement</td>
<td>31</td>
<td>90</td>
</tr>
<tr>
<td>of Revenue and Expenditure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less: Transfer in respect of Printing Services, Refer below</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>Less: Payments made during the year</td>
<td>3</td>
<td>.</td>
</tr>
<tr>
<td>Balance 31 December</td>
<td>89</td>
<td></td>
</tr>
</tbody>
</table>

This provision relates only to employees whose salary is funded from extraneous sources. The Printing Services Department was transferred from extraneous to recurrent activity in 1987.

10. COMMERCIAL BORROWINGS

To finance the Technology Tower project on the Caulfield Campus the Institute entered into a financing arrangement with National Australia Bank Leasing Pty Ltd (NABL). The arrangement was approved by the Treasurer and the Minister for Education of the State of Victoria. This borrowing is repayable in 1997.

11. NON-ACCRUED LIABILITIES

ANNUAL LEAVE

(i) The Institute has not accrued unused annual leave the liability for which stood at $1,702,865 at 31 December 1987. No comparative figure is available for 1986.

LONG SERVICE LEAVE

(ii) The Institute has not accrued the value of accumulated long service leave due to recurrently funded employees at 31 December 1987; the liability for which stood at $4,481,139 (1986 $4,405,603).

12. CONTRACTUAL LIABILITIES

At 31 December 1987 the Institute had contracted but not provided for in the financial statements capital expenditure in respect of:

- Frankston:
  - Extension to Teaching Block A: $556,694
  - Nursing School Building: $79,474

Funding of the Frankston works will be met from grants approved by government and to be received by the Institute over the construction period of the projects involved.

13. CONTINGENT LIABILITIES

The Institute is currently engaged in litigation which if not resolved in the Institute's favour could involve a payment of up to $62,000 plus costs.