QUT

Inside QUT

Issue No 136

Queensland University of Technology Newspaper

August 22 – September 4, 1995

Solar project powers up

System to export electricity direct to Queensland grid

By TONY WILSON

QUT researchers are harnessing the sun's energy to generate electricity for export to the Queensland grid.

A photovoltaic (PV) system comprising eight solar modules, eight sealed gel batteries and a synchronous inverter has been installed on the roof of the ITE building on the Gardens Point campus.

Dr Kame Khouzam from the School of Electrical and Electronic Systems Engineering said the solar panels were capable of generating electricity which could be stored in the batteries or exported directly to the grid through the inverter.

"The inverter is bidirectional, it is capable of converting direct current to alternating current to feed into the grid or converting alternating current to direct current to charge the batteries," he said.

The QUT system is the second solar system in Queensland to be connected to the grid and the first to use batteries.

"The first PV system, called Solar One, is installed on the roof of a house on the Sunshine Coast," he said.

"Such pilot projects provide valuable information to power engineers in the electricity supply industry."

Dr Khouzam said energy sources like solar energy were the key to sustainable development in the future.

"If the planet Earth is to continue supporting life, we must reduce our dependence on fossil fuels and reduce ozone layer depletion," he said.

"Australia is rich for its energy resources and by efficiently managing our resources we can work online with the national approach on sustainable development.

"At present estimates, the world has only enough oil for another 40 years, and Australia's Bass Strait reserves will be significantly drained by the turn of the century.

"Renewable energy is a proven complement to Australia's energy production policy and currently supplies 12 percent of Australia's total electricity. Photovoltaics is one source of renewable energy.

"According to the Australian Institute of Petroleum's forecasts, there is likely to be a fall in Australia's self-sufficiency in petroleum from the 1991 level of about 88 percent to 71 percent by the mid-1990s as production from existing fields begins to dwindle."

Dr Khouzam said the installation of the PV system also had a number of educational benefits.

"Students will be able to conduct a number of experiments in solar energy and photovoltaics," he said.

"Because it is the first system of its kind on the grid, a lot can be learned such as performance-evaluation of the system for different modes of operation, reliability of system components, technical issues like start-up and shut-down, real and reactive power flows and safety."

Dr Khouzam enlisted the help of two final-year electrical engineering students, Reg Nobbs and Leo Lucht, to construct the system.

He said the project would form part of their final-year assessment.

Dr Khouzam said he believed research on the system could provide valuable information to energy suppliers.

"A study needs to be done to identify cases and parameters for which economic advantages to the utility may favour installing either stand-alone or grid-connected photovoltaic systems..

"The decision on whether to install a PV system should be based on an evaluation of the economic benefits to the system owner.

"We also need to assess the failure rate of components, optimise the sizing of the system and the cost benefits to the system owner whether it be the utility or the customer.

"PV system owners may in fact make money by exporting electricity to the grid by selling at a high rate during the day, currently 11.5 cents per kilowatthour, while buying cheaper energy during off-peak times."

He said the results of such a study would be of use to electricity utilities considering options for its future energy mix.

"With greater demands for the reduction of pollution to the environment, the growing concern over our dwindling conventional energy supplies and the conflicts between nations over energy reserves, it becomes obvious that the utility must consider all the options when making decisions." he said.

Dr Kame Khouzam pictured with the solar modules which transform the sun's energy to electricity for export to the Queensland grid

TV programmers ignoring needs of hearing-impaired

By MARY VISCOVICH

AUSTRALIAN television is ignoring the needs of our hearing-impaired community by neglecting to screen readily available programs for this minority, according to QUT film producer and director Cameron Davie.

Mr Davie has recently returned from a three-month overseas study of television for the hearing-impaired, the result of the award of a Churchill Fellowship.

His topic for the fellowship was to investigate broadcast television programs made primarily for and by hearing-impaired people in the USA, the United Kingdom, Denmark and Sweden.

He said more than 16,000 hearing-impaired Australians, whose first language was Australian Sign Language (Auslan), were being denied access to basic information offered to most Australians through newspapers, radio, television and other media.

There were many hearing-impaired people who were not gaining the benefits of the increasing use of Teletext subtitles on television because they did not have a good command of English, he said.

This in turn was also denying them the level of information and debate needed to participate fully in a democracy.

As part of the fellowship, Mr Davie, a graduate in film and TV from Queensland College of Art working out of QUT's Education Television Unit, visited Gallaudet University in Washington DC.

Gallaudet, the world's only university for hearing-impaired people, produces a monthly program for deaf people across North America.

Mr Davie said one of the most valuable lessons learned during the tour was how broadcasters and government could be influenced to support programs for the hearing-impaired.

"It's time Australia caught up with the rest of the world in addressing the basic democratic right to information denied to one of Australia's most fascinating but least appreciated cultural minorities," he said.

"The Australian Government formally recognised Auslan as one of Australia's official languages in 1987, yet very little has been put in place to provide signing hearing-impaired people with information."

Mr Davie said he first became interested in the issue when he was asked to produce a QUT/Griffith University video about the hearing-impaired community which was also how he met his wife, research fellow and prominent hearing-impaired activist, Breda Carty.

"In almost every other developed nation, this issue has been addressed through the broadcast of at least one regular television program delivered in sign language.

"Channel Four in Britain has just shown our TV pilot program and the BBC has recently screened two of our other programs, yet none have been shown in Australia. Nothing is happening here," Mr Davie said.

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Vice-Chancellor's comment

Future of Quality

THE visit to the university last month by an assessment panel of the Committee for Quality Assurance in Higher Education (CQAHE) completes three annual examinations which began in 1993.

The purpose of this government initiative has been to seek assurance that standards in Australian universities are being maintained and enhanced at a time of great change in the system.

CQAHE has concentrated its examination on processes and outcomes, primarily on the academic side of university life.

CQAHE annual reports provide evidence of continuing improvement and the Commonwealth Government has been assured that university standards are of an international level.

At QUT we have continued to modify our systems in line with good practice and our outcomes are improving rapidly.

Faculties and divisions are responding with energy and innovation. QUT quality reports underline our strengths and point to areas that require further work.

All in all we can be proud of our achievements to date and the assurances received concerning our performance as an Australian university.

The work of CQAHE will continue although the form of quality assessment process is the subject of continuing debate.

Future areas of scrutiny are likely to be student and information services.

I look forward to demonstrating QUT's strengths in these areas.

Professor Dennis Gibson

Students heed security warning

STUDENTS have taken the Security Awareness Program's message of "Be aware...take care!" to heart, saving themselves thousands of dollars over the five months of the program.

QUT Security Manager Mr Fergus Ross has released figures which show a dramatic decrease in theft on campus from the time the industry-sponsored campaign was implemented in September to the end of the third quarter in December of 1994.

Chubb Security has donated $6000 a year to the campaign.

Reported incidents of theft had dropped by a third, saving students an estimated $31,000, Mr Ross said.

The campaign had been so successful QUT security was now advising staff and students on home security. The program had also been requested by and distributed to other universities and business houses.

While pleased with the results, Mr Ross said he was disappointed staff were yet to heed the message as they had become the greatest "victims" of security incidents on campus.

While students were getting the message from brochures, note pads, stickers, timetables, banners and even drink coasters stamped with the "Be aware...take care!" logo and security phone numbers, staff were still being complacent with their property, he said.

"Staff are leaving valuable items of property unsecured and unattended. They are also leaving heaters and urns on and their offices unlocked, when leaving work for the day.

"The university community has to realise times have changed and while our campuses are safer and more secure environments than the suburbs that surround them, we know villains who prey on institutions who go from campuses to hospitals to TAFE colleges and so on.

"We had a fellow who was warned off one campus here recently, who was caught on another campus soon after," Mr Ross said.

Security will launch a new range of campaign items towards the end of the year which will include a short video and key rings to spread the message of crime prevention on campus.

PhD scholarship

QUT's School of Marketing and International Business presented its first externally funded PhD scholarship at a ceremony on August 10.

The scholarship, worth more than $75,000 over three years from Brisbane-based company Inprint Limited, was presented to Andrew Foo.

Attending the presentation ceremony were Inprint chairman Michael O"Brien, Chief Executive Officer Earl Baskerville, QUT Vice-Chancellor Professor Dennis Gibson and Acting Head, School of Marketing and International Business Dr Peter Carroll.

Inprint Limited is one of Australia's leading printing companies with advanced printing facilities located in suburban Zillmere.

The school's Professor Nell Arnold, who will oversee supervision of the doctorate, said the scholarship would provide Inprint with direct access to knowledge and applied expertise of the research undertaken.

She said it would also provide QUT with the opportunity to extend its research and 'real world' industry links.

"Inprint's scholarship sets a precedent for industry to support a PhD research fellow dedicated to marketing and international business research specific to the industry," Professor Arnold said.

"It also allows industry to be active in establishing leading edge practice underwritten by international research into effective international marketing, communication and business development philosophy and practice."

Professor Arnold said she saw the scholarship as particularly important at a time when Australia was seeking to establish new research and application models with the intent of internationalising both academic and industry endeavours.

Mr Foo said he felt honoured to be awarded the scholarship and was overwhelmed by the reality of the challenges that would arise in the future.

"It is not often that one gets the opportunity to realise one's dream as I always wanted to do a PhD program," Mr Foo said.

"It has always been my aim to increase Australia's competitiveness in the global market particularly in the Asian region.

"A PhD program provides the avenue to research, so that the information gained will benefit both industry and student alike."

Mr Foo, originally from Singapore, obtained a Diploma in Industrial Management in the United Kingdom in the 1970s, was an undergraduate at the Royal Melbourne Institute of Technology majoring in marketing and undertook his masters at the University of Queensland majoring in international business.

Project aims to help Red Cross forecast demand

THE Red Cross Blood Bank has awarded QUT's School of Mathematics $12,000 for collaborative research into inventory and forecasting systems.

Project leader Dr Erhan Kozan said the 18-month project would identify strategies to streamline management of inventory and the production of red blood cell products.

He said it would also allow the Red Cross to forecast demand for blood products. This would make it easier to plan in advance for advertising campaigns to encourage donations to meet peak times.

Dr Kozan said he and research assistant Ms Virginia Stirling would apply the concepts of operations research to make recommendations to the Red Cross.

"Operations research is the application of scientific method to problems concerning the management of systems of people, machines, materials and money in industry, business, government and defence," he said.

Letters to the Editor

Planner opposes Bill

I feel compelled to comment on the view expressed in edition 134 that the Queensland Government's Planning, Environment and Development Assessment Bill will benefit Queenslanders.

The article reflected neither analysis of oppositional views, nor examination of the consequences of proposals within the Bill.

The governmental view iterated in the article was that councils will be required to solicit public contributions to land-use planning matters before writing a planning scheme.

Somehow this is a 'step forward'.

But, as the Bill neither compels a council to listen to, nor incorporate any of, the views it is compelled to solicit, one must question why it is a 'step forward'.

Opposition to the proposed legislation includes members of the planning profession, civil libertarians, and environmental and community groups across the State.

Political analysts suggest the purpose of the Bill is to fast-track development in Queensland.

Environmentalists are particularly enraged as the Bill effectively removes Environmental Impact Analysis from the vast majority of land-use development undertakings.

Civil libertarians question why the Bill removes many of the public rights currently in place to allow the community to make contributions to the design of landscapes to be modified.

Others say that the Bill transfers many of the costs of land-use planning regulation from the State taxpayer to the council ratepayer.

Because taxes are collected according to income, and rates are not, they say the Bill promotes distributional injustice.

Whatever one's point of view of the Bill, the article did not reflect a level of examination and inquiry expected of a university.

I recognise that *Inside QUT* is not designed as a venue for discussion and debate.

However, if it is to properly fulfil its role as an organ of university public relations, articles should reflect that members of the university have indeed undertaken examination, inquiry, discussion and/or debate.

Bruce Moon
School of Planning, Landscape Architecture and Surveying

Former students remember art collection

We note with interest and pleasure the article *QUT collection of art dates back 50 years* in Issue No 135.

We were of the initial group of some 300 students at the Teachers Training College in 1944-45 who contributed twopence a pay day (once a month) to establish an art collection.

This collection was not so much a teaching resource as a means of improving the aesthetic environment of the college in those days particularly spartan.

It consisted of one building not unlike the ordinary primary school, and is now known after much refurbishment as Block A (Kelvin Grove).

The picture being held by Mr Rainbird in the article is not Hans Heyson's [sic] *Mt Patawarta, Land of Oratunga*.

We remember Heyson's [sic] picture well; it was damaged in transit by post and repaired with the artist's permission by local artist William Bustard.

One of the students (Geoffery) picked up the repaired picture from Bustard's studio on his way to college one morning.

Students were much encouraged by the enthusiasm of the lecturers at the time Mima Laing, Clare Hunt (later Glazebrook) and Clare van Homrigh who had just returned from war service.

The artists were generous in reducing their prices as were the picture framers.

We look back to the humble origins of the QUT collection with pride, grateful to the lecturer instigators who were serious enough to recognise the chasm that separates the state of owning no work at all and the blessed state of owning one fine picture.

Doris Hawkins, Group J,II B 1945
Geoffery Swan, Group J, II D 1945

Well spotted! The work featured in the photograph accompanying the article you refer to is in fact Lionel Lindsay's Palace, Benares *purchased in 1948.*
Ed.

Inside QUT welcomes letters to the Editor.
Correspondents are requested to limit letters to 250 words or less

From the Inside... by David Hawke

Cartoon

Hospital health care to worsen

ASSOCIATE staff member of QUT's Australian Centre in Strategic Management Dr Tony Morton has a pessimistic view for the future of hospital health care in Queensland.

By NOEL GENTNER

Dr Morton said he believed that, overall, the large hospitals at present were becoming smaller, but busier, with fewer staff and sometimes seemingly perverse budgetary constraints and managerialist philosophies which led to unsatisfactory morale.

He said until this scenario was confronted, problems including complications and infections within hospitals would be likely to worsen.

Dr Morton has had more than 20 years experience as a hospital staff specialist and has a particular interest in statistical aspects of various clinical indicators of a hospital's quality accreditation performance.

He said there were a number of intangible issues that came into the balance sheet of the day-to-day running of hospitals.

"In a sense we are very much in danger of using short-term, quick-fix policies that in the long term will have effects that are worse than the issues they have dealt with in the short term," Dr Morton said.

For the past year, Dr Morton has been involved with the work being carried out by the Infectious Diseases Unit at the Princess Alexandra Hospital in Brisbane.

"We have taken statistical process control methods from manufacturing industry and industrial quality control and applied them, particularly in the area of infection monitoring and control in hospitals," Dr Morton said.

"These methods have been refined and are being programmed into the hospital data collection computer system to give a signal if the situation is changing to any significant degree."

He said statistical data collected included a patient's length of stay in hospital, infection rates, complications following operations, and unplanned readmissions to hospital.

"The sorts of infections we have been monitoring at PA hospital include wound and post surgery infections and the rates have been comparable with Australian Council and Health Care Standards guidelines," Dr Morton said.

"We have also looked at a recent outbreak of a new multiple antibiotic-resistant organism called Klebsiella which now seems to be under control.

"This organism is being monitored on a fortnightly basis to ensure there is an early warning system for any future outbreak.

"One does not know what the future holds, but in many respects, the situation is probably likely to get worse with fewer antibiotics being developed and organisms adopting increasing resistance to many antibiotics."

Dr Morton said one of the likely consequences of the use of market forces to make hospitals more efficient was an increase in the incidence and problems of complications.

"One of the major determinants of hospital-acquired infections is a consequence of work overload," Dr Morton said.

Dr Morton said there was a big move now to build into the data acquisition systems, not only the methods for early detection, but methods to adjust for the severity of the illnesses.

He foreshadowed in the near future that all hospitals would be required to collect what he termed "so called indicator or adverse occurrence data" and this would provide the foundation for comparisons to be made among hospitals.

"If such data are used for benchmarking, that is, finding those who do best and then publicising their processes so that others may benefit, overall improvement should follow," Dr Morton said.

"However, after adjustment for severity, most differences are likely to be found to be due to random variation.

"Nevertheless, when a hospital examines its own outcomes, longitudinally using statistical methods and strives for continuous improvement, high quality work will result," Dr Morton said.

Brigitte Echaubard…getting the edge is costly and time-consuming

Brigitte has high hopes for a career in commercial aviation

QUT science student Brigitte Echaubard hopes her degree will give her a flying start into the highly competitive world of commercial aviation.

She wants to become one of the few women working as pilots in Australia's airline industry.

But getting "the edge" is a costly and time-consuming venture for the 17-year-old former San Sisto Girl's College student. She is paying $33,000 over two years for her tuition in commercial aviation at Archerfield's Air Training Centre.

When she isn't in a cockpit she can usually be found attending to one of her two part-time jobs at Wendy's Supa Sundaes or running the canteen at the local swimming pool .

"It's hard slog and I have very little money left for myself after paying for the flying. I haven't even thought about paying for HECS yet," she said.

While she initially dreamt of becoming an engineer, all that changed following her first aeroplane flight in a Boeing 737 when she was 15.

"I just loved all that power in the engines as the plane started up and we accelerated down the runway," Brigitte said.

Majoring in mathematics, Brigitte is well into her commercial pilot's course and is working on her private licence. She will then try for the tougher Air Transport pilot's licence.

All these extra commitments mean Brigitte will take four years to finish her degree.

"It is very tough to get into the commercial airlines. At the moment you have to have a minimum of 1000 hours flying time under your belt," she said.

"I am using the applied science degree to give me the edge and I hope to find a job as a commercial pilot to build up my hours after I graduate," she said.

Brigitte said her dream was to fly a Concorde and to graduate from university.

Image of architects needs drastic change

By TRISH PENNICOTT

THE profession of architecture is doing itself a disservice by only promoting the design aspects of architects' work, according to Visiting Professor Dr Andrew Seidel from the College of Architecture, Texas A & M University.

Professor Seidel said architecture was a legally sanctioned profession and the legal sanctioning was for public health and safety reasons and had nothing to do with making things pretty.

"Yet throughout the industrialised world we have, in essence, grown a professional image that focuses on design.

"If something is well styled, is it well designed? Not necessarily.

"Schools (of architecture) in a number of countries have got to a point where so much of what the students focus on is this area of design. It is very important, but it is not enough to maintain a licence.

"In the UK, architects lost their legal sanction for nine months — anyone could call themselves an architect — because there was a governmental commission that couldn't figure out what the relationship (of architecture) was to public health and safety.

"In New Zealand, about three to five years ago, a Bill was introduced to delicence architects.

"Why are we licensing these people if what they do is make bigger sculpture. We don't license artists in industrialised societies, and we shouldn't license artists, that would be a level of regulation that I think we would all see as inappropriate," Professor Seidel said.

Professor Seidel is co-author of *Architects and Their Practices: A Changing Profession* with Professor Martin Symes and Joanna Eley which is due to be released in August.

The book presents a detailed account of the 1990s architectural profession in private practice.

It is based on the attitude survey of UK architects, compiled from the results of a questionnaire completed by about 600 architects in the UK.

"The book is the most comprehensive study of architects at work that's been done to date," Professor Seidel said,.

"The results show that architecture in practice is a knowledge-based profession, but our public image and the image that we give students in school does not fit what is actually going on.'

While the public perception of architects had been increasingly focused on artistic and sculptural aspects of their work, the technical aspects of architects' work had not been promoted, Professor Seidel said.

Schools of architecture were concentrating more on design than on issues where decisions could be substantatively based, for example, the psychology of building.

"The architect is prepared to do project management, construction management, facility planning, client relations, office and budget management, marketing and computerisation.

"However there is a very strong sense in QUT's architecture school that we do need to change our curricula to think of architecture as a knowledge-based profession as opposed to a predominantly artistic profession.

"And the school that does that will take an international lead because all the schools are sitting around thinking about how they can make that transition.

"The artist myth is so strong even within the profession that these are very difficult changes to make, but they are occurring.

"It is an image and it is in the schools. They (architects) learn what they need to know when they get out into practice and I maintain they learn it quite haphazardly.

"Design is obviously very critical, but if we don't correct the public image and also correct our curricula we may face serious challenges to our licensing.

"QUT's architecture school is very strongly trying to move in that direction and they should be applauded for this. Other schools have decided that what we do is entirely aesthetically based.

"I think that in the long term will hurt architecture as a legally sanctioned profession.

"The benefit for Queensland if schools (of architecture) can change to be more explicitly knowledge-based is that the buildings you will get will be far superior to work going on in other parts of the country.

"It will challenge the myths of the artchitect as artist and provide better buildings to work in and live in, play around in and be serious in."

Professor Seidel spent one month at QUT's School of Architecture, Interior and Industrial Design.

He is Professor of Urban Planning and Architecture in Texas.

In 1994, Professor Seidel chaired the 25th annual international conference of the Environmental Design Research Association and edited the publication resulting from the proceedings.

Educated at the Pratt Institute, School of Architecture, New York and at the Graduate School of Design, Harvard University, Massachusetts, and the University of Michigan, Professor Seidel is probably best known for his publications in person-environment studies and architectural practice.

He is also editor-in-chief of the *Journal of Architectural and Planning Research* having developed and created this internationally respected journal more than 10 years ago.

Head of QUT's School of Architecture, Interior and Industrial Design, Associate Professor Gordon Holden said the journal was "arguably the most distinguished journal in the world in our area of research".

"One area we are to keen to move forward in in architecture is research.

"While Professor Seidel is at QUT he is running seminars for senior students on research.

"He is also giving staff seminars and personal sessions with staff.

"He is assessing our (students') research dissertations without first knowing the results we have given so he can comment on our standards.

"It is providing a benchmarking or comparative study of our standards."

Professor Holden said the school had been invited to make a submission to edit a thematic edition of the *Journal of Architectural and Planning Research*.

"This is an honour, simply to be invited in this capacity,' he said.

Professor Seidel was keynote speaker at the QUT 1995 Architecture Winter Colloquium — *The Knowledge Needs for Architectural Practice— Knowing How to Know* on August 19.

Campus quickies

■ *When the going gets tough, the tough get going.*

Education staffer Graham Nimmo put his hand up when he heard of a predicted egg shortage. He now has 20 bantams and a willingness to supply the whole of QUT with eggs. This venture has the full support of his head of school who has, among other things, a rural background in his kit bag.

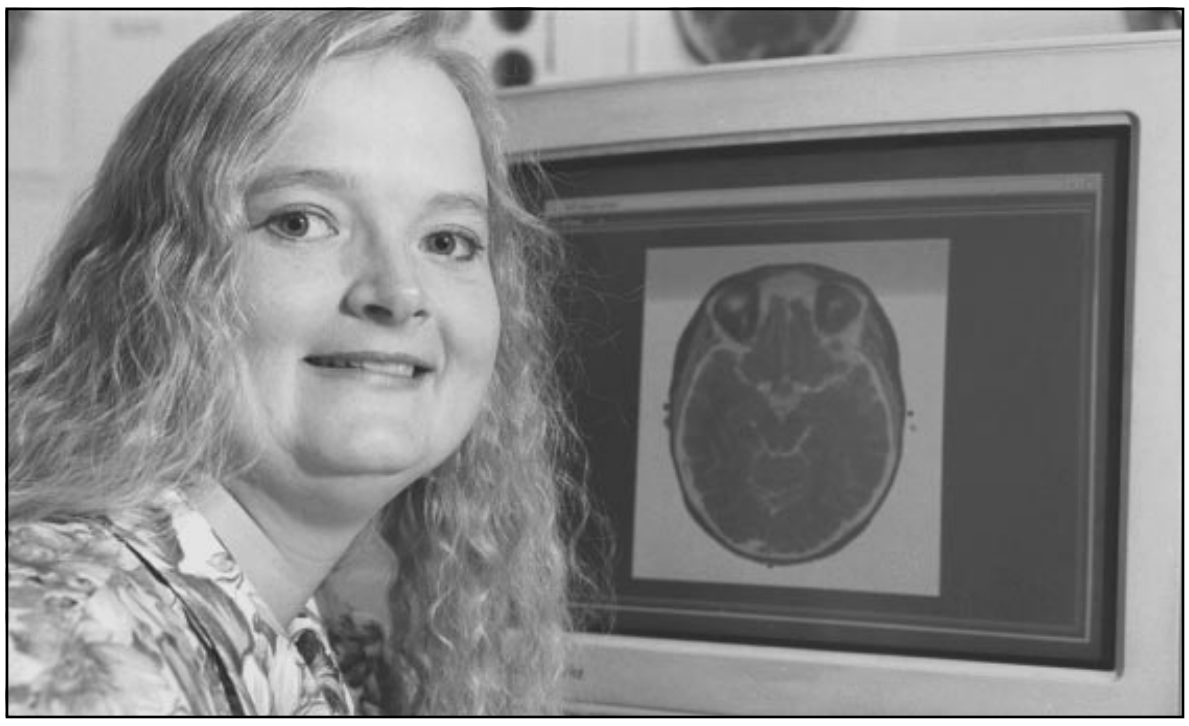
■ ***The Vice-Chancellor and Deputy Vice-Chancellor have moved to level 1 of the Nursing Building at Kelvin Grove campus for the next few months.***

It's not that they are likely to need nursing care at short notice.

Rather the Chancellery end of U Block at Gardens Point is being renovated.

Student uses her brain to get answers

Electrical activity charted in three-dimensional image



Monica Hurdal…'brain function still a mystery'

By NOEL GENTNER

A PhD student at QUT's School of Mathematics is literally using her brain to delve deeper into the human brain to seek more specific answers to as yet unanswered questions.

Ms Monica Hurdal is endeavouring to reconstruct a 3D computer image from scans of her own brain to assist in pin-pointing sources of electrical activity in the brain that are due to observing visual stimuli.

She said it was not an unusual procedure for researchers in this area of work to use scans of their own brain to carry out their projects.

"Brain functions are definitely still a mystery and there is a tremendous amount that is unknown," Ms Hurdal said.

"There is only a basic understanding of anything to do with the human brain and any advancement in knowledge into specific brain functions is welcomed."

Ms Hurdal has completed her first year of her PhD work and believes she will not complete her research and findings until the end of next year.

She obtained an Honours degree in her Bachelor of Mathematics degree, majoring in Computer Science and Statistics at the University of Waterloo in Canada before coming to Australia.

Ms Hurdal said she saw her PhD as an extension of her Master of Science degree by research in mathematics and psychology obtained at the University of Newcastle in New South Wales.

"There are a lot of general conclusions you can make about vision and the visual cortex and how the brain processes information," Ms Hurdal said.

"An example of this is that things you see on the left are initially processed by the right side of the brain in the visual cortex and things you see on the right are processed by the left side of the brain.

"I want to be more specific and obtain a more localised and accurate precise spot of where visual information is processed in the visual cortex.

"It is generally accepted that visual information is initially processed along a deep groove, called the calcarine fissure, which runs through the visual cortex located at the back of the brain."

Ms Hurdal said she was trying to identify, within a few millimetres, particular areas that were doing the visual processing.

She said she hoped to do this by using magnetic resonance imaging scans of her own brain to reconstruct a 3D computer image from them.

This would provide a 3D surface that could be used to pinpoint the location of the processing source in the brain.

"There is a lot of discrepancy as to the exact location and how much tissue is devoted to processing particular parts of what you see," Ms Hurdal said.

"I am trying to create a 'cortical magnification map' to determine the amount of neural tissue which processes information from the visual field.

"For example, central vision processes finer details than peripheral vision, and so more area of the brain is devoted to processing central vision.

"I am endeavouring to map and describe the relationship between specific areas of the visual field and how much of the visual cortex processes those areas.

"In this particular aspect of my work, the methodology I am taking is novel and will give medicine and psychology a new quantitative tool for investigating the visual cortex.

"This methodology could also be applied to other areas of brain research, such as determining the relationship between specific tones or sounds and how much of the auditory cortex processes those tones.

"My work and research will hopefully provide a set of computer programs and algorithms to interpret data and provide more specific answers."

Ms Hurdal is carrying out her PhD work under the supervision of Professor Sean McElwain.

Professor McElwain said Ms Hurdal's work was a prime example of how mathematics could be used in other disciplines to solve new problems.

"What we do is take ideas from another discipline and work within a mathematical framework, developing mathematical models to aid in the interpretation of experiments and data for that discipline," he said.

PIRIS to monitor research info

QUT is leading Australian universities in the development of an information management system for research performance indicators.

When completed, the Performance Indicators Research Information System (PIRIS) will streamline reporting on research activities and will put valuable information at the fingertips of decision-makers.

The project has been funded by a grant of $121,474 from the National Priority (Reserve) Fund.

It is a collaborative project between the Division of Research and Advancement and the Division of Information Services.

The project team consists of Judy Waugh, Diana Norkaitis and Marek Bienko from Management Information Systems and Norma Gilbert and Moira Wood from the Office of Research.

Ms Wood said QUT, as with all Australian universities, collected information to report to DEET agencies on research performance and general research outcomes.

"PIRIS will take these raw research data and greatly enhance performance management and evaluation," she said.

"It will have predictive and modelling capacities able to translate operational level information into a form that meets the needs of managers and executives."

She said the Office of Research aimed to develop a product not only for use within the research office, but something that would be used for research management purposes throughout the university.

"PIRIS will provide information on evaluative and comparative research indicators to aid in the development of appropriate strategies and research management objectives," she said.

"The information may be used by centre directors, heads of schools, deans, pro-vice-chancellors right up to the vice-chancellor."

Ms Wood said the PIRIS team had aimed for an end product that was as flexible and accessible as possible to best meet the needs of a diverse range of users.

"The idea is for a very user-friendly 'click and point' type interface operating in a Windows environment, for presenting the information in spreadsheet or graph format," she said.

Ms Wood said PIRIS could become a software application for use within Australian universities.

"It is designed to use performance indicators set down by both DEET and higher education institutions, but is flexible enough to allow universities with different research focuses and performance indicators to customise PIRIS to their needs," she said.

"By the end of this year programming should be written and we should have a test system.

"The test will come when the system goes on-line at QUT early in 1996, where it will be implemented on our research information system."

Ms Wood said the final report was expected to go to the National Priority (Reserve) Fund in April 1996.

Researcher seeks order in chaos

CHAOS is in the everyday thoughts of one newly appointed senior lecturer's mind at QUT's School of Mathematics.

Dr Rodney Wolff is applying some aspects of chaos theory and statistics to two research projects.

One project concerns patterns in speech and using computers to recognise spoken words.

The other project involves statistical analysis of financial systems using measures of stability in such processes as international monetary exchange rates.

The exchange rate project is a joint effort by Dr Wolff and a colleague at the National School of Statistics and Economic Administration in Paris.

Dr Wolff said it had only been in the past decade that mathematicians had had sufficient theoretical knowledge to look seriously at chaos theory.

He said the theory could be characterised by "making observations on a system at successive time points such that two runs of observations which begin a small distance apart will follow very different patterns as time goes on."

Dr Wolff said this meant that if a small error was made in the detailed recording of observations over a period of time one's prediction would be nothing like the actual outcome.

"Data which are chaotic exhibit strange behaviour but really follow a few very simple deterministic rules that don't change," Dr Wolff said.

"Because of these deterministic rules you can find patterns in chaos."

Dr Wolff said he was interested in monetary exchange rates because they had certain regimes of stability where they could fluctuate without plummeting or skyrocketing.

"Observers have not yet decided whether exchange rates have strong random components or whether there is evidence of chaos there, some deterministic rule which is responsible for the complicated behaviour," he said.

Dr Wolff said his research aimed to estimate a statistical measure of stability in exchange rates rather than creating an explicit deterministic mathematical formula.

In his other project, Dr Wolff is endeavouring to apply the same deterministic approach to human speech traces for computer speech recognition.

"My approach is to build up graphical patterns in speech traces and identify word patterns with figures for the computer to recognise the spoken word," Dr Wolff said.

"It is slightly more intuitive than existing methods which try to tune parametric models.

"What I am trying to do is to say that this shape or picture obtained from speech data corresponds to an actual word."

Dr Wolff said he hoped to have one of the projects completed by the end of the year.

Scientists develop disease-resistant pawpaws for south-east Asian market

QUT'S Centre for Molecular Biotechnology has received a grant of $429,000 to genetically engineer disease-resistant pawpaws for Thailand and Malaysia.

Centre Director Professor James Dale said an epidemic of the papaya ringpsot virus had devastated crops in south-east Asia.

"In Thailand in the mid-1980s they were exporting around $US70 million in pawpaws. Because of this virus they now can't even supply their domestic market," Professor Dale said.

"The virus is spreading throughout south-east Asia. Typically it remains at a low level for three to five years before erupting into an epidemic. Once that epidemic hits, it's impossible to stop."

Professor Dale said there was virtually no naturally occurring resistance to the virus in Thai pawpaw varieties, leaving genetic engineering as the most practical solution.

"We have developed a method of transforming pawpaw in Australia which is really very good," he said.

"To make the resistance genes we actually take genes from the virus and put that into the plant.

"We have already done this successfully in Australian plants with Australian isolates of the virus.

"So what we have to do is work with Thai scientists to develop a similar process specific to Thai cultivars."

Professor Dale said the project was funded by the Australian Centre for International Agriculture Research (ACIAR) and was being conducted in collaboration with scientists from the Thai Department of Agriculture, two Thai universities and the Malaysian Agriculture Research and Development Institute.

He said ACIAR had the mandate to sponsor collaborative agricultural research between Australia and other countries.

"ACIAR projects have to be collaborative — there has to be something of benefit to Australia. In this case it is the chance to build on existing Australian research into pawpaw disease resistance," he said.

Professor Dale said he believed developed nations like Australia had a responsibility to share technology and expertise with developing countries.

"I believe biotechnology and information technology are very real examples of where the division between rich and poor countries can become greater," he said.

"Rather than being of use to the world, it (technology) will actually create a much wealthier group and a much poorer group because developing countries don't have a history of being involved in biotechnology and don't have access to that expertise.

"From an ethical point of view, I think it is essential they (developing countries) have access to that technology," Professor Dale said.

Post-modern school teachers need to teach critical thinking

SCHOOLS are in danger of becoming the dead heart of education if teachers do not adapt their strategies for today's post-modern generation, according to senior lecturer in QUT's School of Cultural and Policy Studies Dr Erica McWilliam.

Dr McWilliam issued this warning after analysing the impact of today's global information explosion on education in schools.

Her concern is that school teachers, by resisting the impact of technology, will hold children back in their learning.

"My fear is that children who don't get the opportunity to explore technology at school will be running home each day to get on to the world-wide web and will take in what they see uncritically," Dr McWilliam said.

A former high-school teacher with 25 years teaching experience, Dr McWilliam said "stand and deliver" teaching was no longer able to capture the attention of a generation brought up on a slick-and-quick diet of MTV video images.

"The problem today is that we've got modernist teachers trying to teach post-modern kids," she said.

"For example, a modernist engagement with technology means grabbing the remote control, looking for what we want to watch on TV and settling on a program.

"For a post-modern young person, that clicking of the remote control is not about settling on one program necessarily. The collage becomes the program.

Dr Erica McWilliam

"The idea that a lesson is a program and that the program has a one-way flow from beginning to middle to end is now under question because of the way young people today process information."

Dr McWilliam cited the work of educationalist Dr Bill Green of Deakin University in Victoria who in the book, *Aliens in the Classroom*, stressed that the teachers might be the aliens, not the students.

"He says that young people today live their lives by 'choice and speed and chance', very differently from the way those of us over 25 may have lived our lives. They make meaning out of collage. For example, at a film festival in Melbourne recently there were a couple of films playing at the one time in a cinema.

"The young people had no problem tapping into this. The adults, on the other hand, ended up in the foyer in a very short space of time because they couldn't cope with the disparate images coming at them."

Dr McWilliam said the challenge for today's teachers was to take technology and the world-wide media possibilities by the horns and use them to develop critical thinking in their students.

"Teachers can't afford to be techno-paranoid, but nor can we afford to give three cheers for technology," she said.

"If we want our children to be knowledge producers and not simply information accessors then we need to be able to engage sceptically.

"We need to put critical thinking and scepticism to work without allowing it to slide into cynicism in the classroom.

"If we understand our work as purely information delivery we may as well give up teaching now because technology will definitely do that better. We have to understand the difference between knowledge and information and what that means in today's high-technology society."

In a recent paper, *Aussie Teacher Meets Mike Jordan in Cyberspace*, Dr McWilliam examined the kind of "teaching" achieved by the popular American basketball star.

"Mike Jordan has become a cultural construction able to transcend the boundaries of western knowledge, culture, race and gender," she said.

"His image is very seductive to young people and teachers can't afford to ignore someone like Mike Jordan in their classrooms."

Dr McWilliam said the idea of "making learning seductive" bothered some teachers.

"I'm not talking about dazzling students with technology as some kind of incentive to learn," she said.

"We have to help students to understand the difference between the data and knowledge. We don't want hands on, minds off.

"But most importantly we need to make learning pleasurable and we as teachers need to demonstrate our love affair with our discipline and with ideas — and that's whether we are standing in front of a class or preparing a lesson on a video."

Dr McWilliam is publishing an edited collection of papers *Pedagogy, Technology and the Body* with Peter Lang Publications, New York in 1996.

She is holding an editing symposium at QUT in October for all writers involved.

Science writing subject on offer

SCIENCE students now have the opportunity to include a writing elective in their degree course thanks to inter-faculty cooperation.

School of Communication lecturer and subject coordinator Bernard McKenna said the subject would address the written communication needs of science students, an area previously overlooked.

"The writing needs of science students are generally not considered very much even though they are required to do a great deal of writing at university and in their professional lives," he said.

"By catering for this need, QUT will give its science graduates greater confidence to articulate their research in traditional academic forums such as papers and academic journal articles."

Mr McKenna said the subject, *Technical and Scientific Writing*, would provide valuable practical skills from gathering and organising ideas through to drafting and proofreading.

"Students will learn some language basics such as how to write clearly and with style," he said.

"Students can choose to study particular genres such as reports, manuals or essays, but will also come to understand science writing as a discourse, explaining why and how scientists write in their distinctive style."

Mr McKenna said the subject would suit most second-year science students, but would also be available to postgraduate students.

New degree courses in Built Environment and Engineering

QUT plans to offer three new masters degrees within the Faculty of Built Environment and Engineering in 1996.

While the titles of the degrees are yet to be finalised and the courses are awaiting accreditation, the courses are in the areas of Industrial Design; Urban and Regional Planning and Landscape Architecture.

Associate Professor of Industrial Design Vesna Popovic described the Industrial Design course as an exciting continuation of the Graduate Diploma in Industrial Design already offered within the School of Architecture, Interior and Industrial Design at QUT.

"We expect to have a great deal of interest particularly from overseas where I think it will be very well-received," Professor Popovic said.

"We will offer a full or part-time option with the graduate diploma as a course component and after completing that students who have at least a grade point average of five can continue into the masters component."

Professor Popovic said the major objective of the masters was to provide postgraduate education opportunities in the area of industrial design.

This means the program will involve an advancement of application in knowledge and expansion of the skills relevant to industrial designers while also expanding the research base and moving towards entrepreneurship.

The duration of the course is three semesters as a full-time option (a year and a half) or three years part-time.

Senior lecturer in the School of Planning, Landscape Architecture and Surveying Dr John Minnery said the Urban and Regional Planning course would be a professionally recognised course run over two years full-time for non-graduates of the school and one-and-a-half years for those with a Bachelor of Built Environment. It would also be offered part-time.

"We are upgrading our current Graduate Diploma in Urban and Regional Planning with the masters and adding additional material so there will be actually two exit points from the two-year course, one will be after three semesters, or you can go right through," Dr Minnery said.

"Our current graduate diploma is recognised by the Royal Australian Planning Institute. We will apply for recognition of the new course and we are extremely confident of getting it."

Dr Minnery said the school planned to offer specialisations within the course in the four areas of regional and local development, urban housing and community development, urban design, and environmental and resource planning.

He said the masters would appeal to those interested in a high-level, professionally recognised, course in urban planning or those with qualifications in another area intending to get the basis for a professional qualification in urban planning.

"We will be continuing the tradition we have within our graduate diploma which is real-life projects often done for real community groups or for local authorities which is something the school is very proud of," Dr Minnery said.

Lecturer in Landscape Architecture and nominal course coordinator Glenn Thomas said the new Landscape Architecture course would fit into QUT's goals of increasing the availability of professional masters degrees and of coursework masters that incorporate research components.

"The aim is to increase the body of knowledge of landscape architecture through specialisation and through research-based projects."

He said the focus would be primarily on the five different areas of landscape design, landscape practice, landscape planning (which is an important widening of the spectrum of the profession), landscape technology and landscape management.

Mr Thomas said he expected the course would attract those with a three-year Bachelor of Built Environment degree who were doing the final year of the graduate diploma to gain their professional qualification.

"Those who achieve the minimum grade point average of five will be able to get a masters degree which is fully professionally accredited with just one further semester of study beyond the existing graduate diploma," he said .

The masters would also offer those with other degrees the choice of either the graduate diploma or the masters in two or two-and-a-half years respectively. Part-time options are also available.

"It will offer existing professionals in practice, who need to update their qualifications, that professional development opportunity," he said.

Education and industry work together

THE Cooperative Education for Enterprise Development (CEED) program enables students to acquire real skills and work experience they would not otherwise receive during their study years, according to CEED Program Coordinator, Graham Willett.

"The CEED Program adds value to the training of university students and enhances their employment prospects," Mr Willett said.

The aim of the program is to enable industry to use the talents of senior undergraduate students from a number of disciplines to complete specific industry projects as part of their fourth or honours year thesis.

Originating at the Royal Melbourne Institute of Technology in 1985, CEED is now well established on nine Australian campuses with others getting underway. It is in its fourth year at QUT.

The program is endorsed by and received start-up funding from the Department of Employment, Education and Training for the first two years. It is now self-funding.

Industry projects are selected on commercial merit and mutual benefit to ensure both industry needs and the student's training are met.

"Training in project management is undertaken in conjunction with the student's CEED project. While this makes it a little tougher, it provides the student with better and more rewarding training," Mr Willett said.

The students are required to work a minimum of eight weeks full-time on the project at the end of their third academic year during their annual vacation.

They then work approximately one-and-a-half days per week part-time on the project during their fourth academic year.

Supervision of the project is undertaken by the organisation hosting the project as well as the student's particular university. This supervision is supported by the program coordinator.

Mr Willett said the program enabled industry to easily access university resources in a businesslike manner. Costs were predetermined, contained and commercially competitive.

"Work is completed in a stringent commercial environment to provide cost benefits to the participating organisation."

Organisations were able to monitor and, if necessary, realign the work to ensure its relevance to their needs.

Expenditure could also be claimable under the 150 percent taxation incentive scheme for industry research and development, Mr Willett said.

QUT CEED projects underway this year include planning for the sustainable development of rural land in Blackbutt (Washington Developments Pty Ltd); quality assurance, accreditation and continuous improvement (Bentley's); reprocess engineering of the blood products laboratory (Red Cross Blood Transfusion Service); study of statistical process control and its application in production processes at the Darra Plant, Brisbane (Queensland Cement Limited); vehicle mounted GPS receiver in compact form (Hamil Haven Pty Ltd); and manufacturing information system (Pratco Industries).

Enquiries about the CEED program can be directed to Graham Willett on (07) 3273 2804.

Ben Sawley…'very worthwhile project'

Blood products in the limelight

PROCESSES for producing life-saving blood products are being streamlined through a CEED project between QUT and the Queensland Red Cross.

QUT student Ben Sawley has been working with the Red Cross since mid-way through last year looking at ways to maximise efficiencies in the manufacture of various blood products.

"The Red Cross contracted CEED to look specifically at the efficiencies associated with their manufacturing of blood components," he said.

"It involved business process reengineering, reengineering their production function and reorganising production equipment to maximise efficiency and getting rid of all non-value adding tasks.

"They're going to achieve very significant savings in terms of time taken to produce products and transport and handling of materials for the different products."

Mr Sawley said the project also focused on the comfort of workers as a way to achieve efficiency gains.

"Things like time and motion studies of production staff and basically working out how to make their jobs more productive and also to make them more comfortable," he said.

"If you can make the production person more comfortable then they're going to produce better and for longer without getting fatigued."

Mr Sawley said the project was an excellent opportunity for him to apply, in a real-world setting, many of the concepts he had studied in his combined Bachelor of Engineering (Manufacturing Systems) and Bachelor of Business (Marketing) degrees.

"It's been a very worthwhile project for them as well as myself," he said.

"It has involved me undertaking a project of a magnitude which I wouldn't get to undertake normally in a normal final-year thesis type arrangement.

"On the manufacturing side probably more so than the business side, there are some industrial engineering concepts which is one aspect of our course that is directly applicable to what I'm doing at the Red Cross."

He said the chance to go beyond the theoretical and to put his recommendations into practice was the principal difference associated with a CEED project.

"With a normal project the submission of my recommendations would have been it, but because with CEED you start earlier and because you're contracted, I'll actually get a chance to implement my recommendations which is tremendous," he said.

Red Cross Queensland Quality Manager Mary Hardwick was full of praise for Mr Sawley and the Ceed program.

"Ben is an exceptional student for starters, so it's been wonderful to have him come in as an outsider to look at our systems. It's very good to have someone who can see the wood for the trees," she said.

"It's helpful for us to have someone dedicated to that project because while you might have the skills internally, you simply don't have the time to dedicate to it, so it's good to have someone who has it as a discrete project and they manage it and get on with it.

"We will have enormous opportunities to improve our efficiency and productivity and that should translate into greater staff satisfaction with their roles and their day-to-day jobs."

Info system keeps company on track

MASTER of Engineering student Edakunni Gopinathan began work in May on a manufacturing information system for Pratco Industries, under the CEED Program.

Pratco Industries is a manufacturing company with branches in Brisbane, (where it employs 62 people) and Ayr (where it employs 20).

"We are a developing company with a great range of products," Pratco chairman, Allan Boswell said .

"We make approximately 1600 products, such as equipment for cane harvestors, grass cutting blades, drill piles."

The company has experienced considerable growth in the past two years, with approximately 20 percent annual growth over this time.

"As you grow you need to formalise your operations and become more disciplined, " Mr Boswell said.

"You need to keep a record of efficiencies and procedures and a whole range of things the management information system will help with.

"It will also highlight for staff where our weaknesses are and where we can make improvements."

Dr Lin Ma of QUT's School of Mechanical and Manufacturing Engineering is supervising Mr Gopinathan on the project.

Dr Ma said Pratco was a very traditional company that did not have any modern manufacturing information system in place.

"The company realised that they needed to have a manufacturing information system in place to link information from the shop floor manufacturing line to the marketing, to the finance and to the top management so they could know what was happening in the whole business process.

"But they had no idea how to do that," Dr Ma said.

"We talked to management about the project and we gave them training on the theory, measures and concepts of a manufacturing information system.

"This system will bring them a lot of change - organisational changes, management changes, business process changes - not only information.

"It means a new culture for the company. The management is committed to the change and very positive.

"They knew they needed a change; it was just a matter of how to change.

"They now start to understand the principle and the theory behind the project and they support the project," Dr Ma said.

Mr Gopinathan had also been working closely with Pratco staff to set up databases which was very important for the company, she said.

"He will develop a manufacturing information system model by the end of September and then make recommendations on implementation of the model.

"Implementation is a really critical process."

Dr Ma said the principle of the CEED Program was very good because it brought education and industry together and had benefits for both.

In this project, for instance, if the industry had had a consultant on the project it would have been much more expensive and the consultant probably would not have devoted the time to do things like develop a model and database, she said.

"It is much more economical for the company to do it this way.

"It is also good for university staff and students. The students get real work experience and produce results. Every CEED project has to have an outcome."

The program put participating students in a better position to find employment, Dr Ma said.

Project examines QCL production processes

QUEENSLAND Cement Ltd has engaged QUT maths student Chung Lam Leung to advise on the implementation of statistical process control (SPC) at their Darra plant.

Mr Leung said QCL was interested in finding out which of its production processes could benefit from the introduction of SPC and which SPC package would be most appropriate.

"At the present stage the company wants to apply the SPC program but they are not sure whether it is suitable or not," Mr Leung said.

"The purpose of my project is to determine whether it is feasible or not and to pick out one small process area as a test and look at whether it is possible to expand it to their whole plant."

Mr Leung said his project was composed of two stages.

"I am in stage one which is looking for the process area for the testing for the implementation of the SPC program and also to decide on a software package," he said.

"The second stage is if I find out which process area and if I recommend a software package, then next year's student can try and work out the technical aspects of how to implement that program as well as how to do the documentation."

Mr Leung's academic supervisor Ian Ogle from the School of Mathemetics said sequential projects such as this were of benefit to the companies involved as well as students.

"Some of these projects may be too large for a single student to undertake but by breaking them up into stages a number of students have the benefit of that practical experience and the company meets its goal," he said.

Export hopes for GPS antenna technology

RESEARCH being conducted by a QUT student in conjunction with industry could result in a major export product for Australia.

Final-year double-degree student in electrical engineering and information technology Steven Bell is nearing the final stages of his project into a vehicle-mounted Global Positioning System (GPS) receiving antenna through the CEED Program.

Mr Bell is working for Australian information technology specialists Hamil Haven Pty Ltd to research an antenna for a GPS system as well as an Ultra High Frequency (UHF) antenna with a covert design which can be applied to the outside of vehicles.

If they are successful, the technology, sought after by industry and government agencies such as the police and the military, could reach a large export market, particularly in the US where there have already been expressions of interest.

Managing Director of Hamil Haven Robert Angel said he had just returned from the US where talks for the new GPS antenna as an integral part of a high surveillance vehicle teaching system had gone well.

"While they knew of the technology over there, they were astounded to see what we were doing with it. We have set up a marketing agreement with a firm over there for the antenna," he said.

"We are at the forefront of applying GPS to satellite navigation systems, which allow all forms of industry to use GPS tracking techniques for large-scale productivity improvements."

Mr Angel, who sits on QUT's Space Centre for Satellite Navigation management board, said that while he had been approached by other universities, Hamil Haven required computer software design and electronic design interface expertise which only QUT could offer them.

He praised the cooperative efforts of QUT who he said had offered constant technical back-up.

"I think it has been to both ours and Steven's benefit as he has done the research and we have been able to offer the real-world application.

"We have taken the ideas and covered them with fibre-glass, paint and dust and assessed the results under these very real conditions."

Mr Bell was equally enthusiastic about his time with Hamil Haven who he said had provided him with valuable experience and project material.

"It has allowed me to work in an area where I really hadn't had any background," Mr Bell said.

"I believe it has really helped me by giving me experience and allowing me to learn how to cope in the commercial world."

Mr Bell is hoping to work in technical designing or technical engineering in communications once he graduates.

"The project has been split into three areas, one for the receiver, one for software and video compressions and another for the antenna," Mr Bell said.

He said the only difficulty so far had been with the UHF communication antenna which was three times larger than the GPS system. However they were working on various methods of getting around this, including using vehicle decor such as the spoilers as a cover for the antennas.

The GPS system is currently going through its final phase of testing.

"The whole point of having a covert antenna is so they are not detectable and cannot be interfered with," Mr Bell said.

"It will have a number of applications apart from use in military and police vehicles. We believe we will see great interest from insurance companies who plan to use it to track stolen vehicles.

It's an exciting project for Steven who started out looking for vacation work and ended up winning the bursary to work on the project with Hamil Haven.

Academic supervisor of the project and senior lecturer in the School of Electrical and Electronic Systems Engineering Dr Tee Tang said the project centred around low-profile designs to disguise antennas while taking into account certain specifications.

"My job is to supervise him as a project student and I also guide him in terms of selection of technology and theoretical and practical consideration," Dr Tang said.

"We think we have solved the GPS antenna problem. With the communications (UHF) antenna we are looking at at least two to three alternate solutions, all feasible. Now we have to select the one most applicable to this problem."

Dr Tang said these solutions included a microstrip patch antenna, slot antenna and a cavity backed slot antenna or a ring slot and linear slot antenna.

A major consideration Mr Bell and Dr Tang are dealing with is the direction of electromagnetic radiation emissions which must be refined so there is minimal exposure of occupants in the vehicle to any rays emitted by the electronic equipment.

"One of the problems is that we are trying to minimise the radiation in the car to protect the occupants from electromagnetic radiation hazard which is something people are very sensitive about at the moment," Dr Tang said.

This means that any of their solutions must sit on the exterior of the car and can't simply be hidden in fittings in the interior of the vehicle.

Dr Tang said he was keen to be involved with further CEED projects as he felt the benefits to the students and QUT were enormous.

"It gives students the incentive to work harder and also to deal with practical real-world problems and they learn to solve these and develop closer links to industry which could lead to future employment and career development," he said.

"Of course the advantage to the commercial enterprise is that they get students of the highest calibre and they also get the technical assistance and advice from QUT."

Mr Angel agreed, saying that Hamil Haven had been so happy with their association with QUT they had already embarked on a second project involving student Shane Rowatt and Professor Anthony Maeder.

Steven Bell (left) with Managing Director of Hamil Haven Bob Angel

On account of quality

BRISBANE accounting firm Bentley's is being aided in the implementation of a quality system by QUT maths student Robert Muspratt.

Mr Muspratt is applying skills developed in a quality management subject taken in his Bachelor of Applied Science (Mathematics) degree to the challenges of the corporate world.

"What I do is to help them with their day-to-day tasks of going about the program and putting together all their manuals and I am working on some of the project improvements and flow charting and things of that nature," Mr Muspratt said.

"They wanted someone who had more of an analytical background, someone who could analyse processes.

"Other applications of maths include general statistics which may be used further down the track."

Mr Muspratt said the project was an excellent opportunity to gain practical experience, sentiments echoed by his academic supervisor Ian Ogle from the School of Mathematics.

"The educational benefits of CEED projects are immense," Mr Ogle said.

"This project is doing him a lot of good in the long term and is improving his job prospects."

Exploring options for Blackbutt site

THE rapid expansion of urban Queensland and the ever-increasing demand for residential land initiated the research project being carried out by planning postgraduate student Michele Silvester.

Ms Silvester, who is taking part in the CEED Program, has been awarded a bursary to explore the options for development of a 2980-hectare parcel of land at Blackbutt, two hours north of Brisbane.

Titled *Planning for the Sustainable Development of Rural Land in Blackbutt, Queensland*, the project will explore the options available to the owners of the land, Washington Developments.

The challenge for Ms Silvester, who is completing her Graduate Diploma in Urban and Regional Planning, has been to make sense of government regulations and guidelines while coming to grips with the constant changes and to then produce some innovative ideas for the future use of the land.

Ms Silvester said her brief from Washington Developments had been to look at possibilities, not just in the short term for the rural block, but over the next 15 to 20 years.

"So far it has involved a lot of research looking at other ideas which have been used to develop rural land nationally and internationally and evaluating all the relevant government policies, " Ms Silvester said.

"I have also conducted a site survey to find out exactly what's happening on the site and also in its context and coming up with a few concepts and eventually a preferred concept for the site's development which the client will be able to use in the future."

Primarily used for cattle grazing at present, the problem facing Washington Developments was that the site was zoned Rural "A" which meant its use was limited, allowing only traditional crop or livestock farming but no industrial, commercial or residential development, Ms Silvester said.

"There are a lot of State Government policies in the area of rural residential development which have changed.

"The local Nanango Shire Council is now revising their rural residential policy," she said.

"The State Government has put in place a planning policy which protects good quality agricultural land from things like urban development.

"What they are trying to do is stop large parcels of valuable agricultural land being sold off to urban development which has seen urban areas spread out, losing agricultural land and making it more and more difficult for farmers to operate viably."

She said the local authorities were responding to this and changing their policies for development of rural residential land and Nanango Shire Council was in the process of making those changes.

"I guess I'm trying to make sense of the planning policies for them," Ms Silvester said.

This has entailed many hours spent in libraries pouring over case studies and liaising with several government departments to work out which different policies relate to developing the site, all valuable for her future in planning.

"It's useful, practical and valuable for me and I'm learning from it and I have the company's support which is good.

"It has also given me more confidence and a greater awareness of what's happening in government," she said.

Apart from documentary research, Ms Silvester said she had also spent many hours speaking to people in the area in an attempt to to gather their ideas and opinions on uses for the land.

While this type of site, generally located on the urban fringe, would usually be cut up into large land parcels and sold for hobby farming or small rural ventures, Ms Silvester said her brief was to explore different ideas.

Ms Silvester said winning the bursary meant she could keep studying this year where otherwise she possibly might not have gone on to do postgraduate studies.

The project would also go towards the course this semester, the largest component of the graduate diploma.

The graduate diploma qualifies Ms Silvester for town planning positions within local, state and federal governments and the private sector.

Academic supervisor and former lecturer in Urban and Regional Planning at QUT, currently working as a senior lecturer in Environmental Planning at Griffith University, Darryl Low Choy, is providing supervision and technical guidance to Ms Silvester on the project.

"Michele is in the process of conducting highly detailed research into the site and must provide me and Washington Developments with regular progress reports on her work," Mr Low Choy said.

"I believe it is a valuable exercise which allows Michele to deal with all the various government authorities and regulations which cover this area while also working for a commercial enterprise.

"There is a large research component and the company has gained the advantage of Michele having access to the university library and other information resources which they otherwise would not have had."

Washington Developments General Manager Don Murphy said the firm had bought the land two-and-a-half years ago.

He said that while they had some options for the short term, such as developing it as a golf course, they were looking to the long-term development of the site when they were approached by QUT.

"We thought about it for a while and decided it would be a worthwhile project for a student of planning and a great idea for them to get to see the real world and it was a fairly inexpensive exercise for us," Mr Murphy said.

He said that while he was not expecting a great deal of news out of the research, he was very interested in Ms Silvester's recommendations, due to be completed at the end of this year, on the site.

"We really believe that Blackbutt will experience growth similar to Caboolture over the next 15 to 20 years and many things could change with the laws in that time."

After 23 years as a developer, Mr Murphy said he had seen many changes and was expecting many more.

History project documents QUT's rich past

WORK on a comprehensive history of QUT, including all predecessor institutions, has begun.

Project leader Professor Noelene Kyle said two researchers had been engaged to support the research which would be authored by herself, Dean of Education Professor Alan Cumming and senior researcher Joanne Scott.

Professor Kyle, who is Head of the School of Cultural and Policy Studies, said the history would examine the contribution of QUT's predecessor institutions to technical and teacher education in Queensland.

"I was concerned that in the current drive by universities to focus on the future, the past and the educational role played by those institutions would be lost," she said.

The history will also position QUT in the broader context of higher education policy in Australia.

"Writing a history of higher education certainly has a policy element and we will be incorporating into this history aspects of the Dawkins era as well as other public policy impacting on the tertiary sector," she said.

"There is a great interest too at the moment among historians in writing histories of higher education institutions.

"Such history is not just about medieval universities anymore. In Australia as elsewhere, the idea of the modern university has changed.

"There has been a reexamination of what a university is, not just in relation to higher education policies, but how did these universities come to be."

Professor Kyle is attending a conference in Montreal, Canada next month on the history of higher education.

"The reason I am going is to look at what is being done elsewhere and link into that, because it is important to place QUT into an international context to pose questions about the role and purpose of a modern university," she said.

"Part of this is about the history of universities generally and how QUT fits into that, so it's both going back to that long past of QUT itself, but also putting it into that broader framework of higher education in Australia and therefore western society.

"There is critical work being done in Britain and the United States which will be useful as comparative data and to address broader issues in educational history."

Professor Kyle said the history would encompass some of the untold, behind-the-scenes stories on how QUT evolved over its long history since 1849.

"There is no doubt that wider agendas are important. But so are stories of individual staff and students and oral history will inform the work as well," she said.

Professor Kyle said she believed the inclusion of oral history and people stories would enliven the book and add to its readability.

"It will be a scholarly history, but we don't want it to be so turgid or so academic that no-one will actually read it," she said.

"We want to meet our scholarly objectives, but at the same time make it a readable, interesting, useful book."

She said in addition to the scholarly history, there were also plans for a smaller book of photographs and illustrations and for a photographic exhibition.

Professor Kyle said she believed it was important to document the history of the advanced education sector in particular before all knowledge of it was lost.

"I'm really interested in the CAE (college of advanced education) sector, the kindergarten college and QIT (Queensland Institute of Technology) which was there before QUT became an entity in 1989," she said.

"They were a very important sector of education and with their disappearance has gone almost any interest in what they actually contributed.

"So part of my reason for doing this is to retrieve some of that history."

According to Professor Kyle, many of the records of the predecessor institutions have been lost or destroyed.

"In terms of the records of BCAE, most people do not seem to know where they are or if any have survived."

Researchers Joanne Scott and Dr Catherine Manathunga said research for the history was progressing well considering QUT had 13 predecessor institutions.

"We are looking at all of the predecessor elements of QUT going right back to the Brisbane School of Arts which started in 1849 which actually held the first technical education classes in Queensland," Ms Scott said.

"From that we move to Brisbane Technical College and from then to the Central Technical College and then QIT.

"We're also looking at the history of teacher training in this State as the Kelvin Grove Teachers College and the Brisbane Kindergarten Teachers College became part of QUT."

The research team is using material from QUT's own archives, material held at the Queensland State Archives, especially for the Central Technical College and manuscript sources at the John Oxley Library.

"We've been collecting material that has been written on other universities to gauge how people generally go about writing the history of a university," Dr Manathunga said.

She said the research had so far produced a number of unexpected historical parallels to contemporary events in QUT's history.

"We have been finding that a lot of the earlier institutions were actually linked into each other and became more and more separate and then came back together again with amalgamations which was a bit unexpected," she said.

"Also there are historical roots to the buildings centred around what used to be QIT and Gardens Point around that George Street area.

"The University of Queensland started there, Central Technical College was there, and teacher training actually started there in the Central Technical College buildings until they were given their own site. So there are some nice resonances there."

History of QUT researchers Dr Catherine Manathunga and Joanne Scott

Professors Kyle and Cumming are keen to hear from anyone who may have or know the whereabouts of any photographs, old journals, student newspapers, staff journals or administrative documents that might assist them with the history research.

Anyone who can help can contact them or the research assistants Joanne Scott or Dr Catherine Manathunga.

They are located in room 127 of E Block on the Kelvin Grove campus or can be contacted on (07) 3864 5986.

Architect Desley Campbell-Stewart ... preserving our heritage

Preserve our heritage for future generations

BY preserving some of Queensland's most historic buildings, graduate architect Desley Campbell-Stewart hopes to ensure future generations appreciate our unique heritage.

A director of Allom Lovell Marquis-Kyle Architects **based at Fortitude Valley, her impressive credits include the newly opened Treasury Casino complex and the Lands Building in Brisbane's George Street.**

She is currently working on approximately 100 projects, including historic homes and buildings, throughout the state.

An expert in conservation, design and interiors, Ms Campbell-Stewart said she gained a great deal of satisfaction from her work involving historic structures.

"Each project usually takes an average of three years from start to finish," she said.

Ms Campbell-Stewart said it was extremely important for restored buildings, in some way, to reveal their true age.

"Sometimes there is pressure placed upon us to make them look brand spanking new," she said.

"Look at cities like Venice where the buildings are openly decaying. The Venetians accept and appreciate their heritage.

"There is a culture in Australia which doesn't understand that everything old doesn't have to be new again."

In her award-winning design for the Rockhampton Roundhouse, a section of rusty iron has been retained to record where the city's steam locomotives were once housed and serviced.

The design, which won the 1994 Royal Australian Institute of Architects (RAIA) Conservation Award, has incorporated modern offices into the former shed owned by Queensland Railways.

Her work on the Toowoomba Regional Gallery, where she added extra space to the existing structure, won last year's RAIA recycling honour.

After studying six years part-time, Ms Campbell-Stewart graduated with a Bachelor of Architecture in 1988.

During her studies she worked in various architects' firms before joining her present business in 1985.

In 1992, at the age of 28, she became a director - the youngest female architect to be appointed to that position in a Brisbane firm.

She is currently undertaking an external Masters in Conservation Practice course with York University in England.

Ms Campbell-Stewart said work showed no sign of slowing down. As well as her other projects, she was busy helping to preserve western Queensland's outback heritage.

She visits Charters Towers once a month to advise business people and consult with the shire council on a new town plan designed to balance the area's history with its growth as an international tourist destination.

Postgrad art students exhibit works

Artist Leigh Camilleri

IN the real world real artists exhibit their work to critical appraisal and QUT Master of Fine Arts and Master of Arts students are no different.

A combined exhibition of work from Honours, Master of Arts and Master of Fine Arts students at the Palace Gallery, 46 Merivale Street, South Brisbane from August 28 to September 8 will give postgraduate students a chance to hone their skills in the art of mounting exhibitions.

Lecturer in visual arts John Armstrong, who is coordinating the exhibition, described the process as one of the elements which distinguish QUT undergraduate and postgraduate art courses.

"This gives students the opportunity to exhibit their work frequently," Mr Armstrong said.

"In a lot of visual arts courses, there is one show or two shows in the course of the students' enrolment.

"We have in the undergrad course nine to 10 shows that art students would be involved in during the course of their three years and the postgrads are usually involved in about three every year.

"So that gives them an opportunity not only to enhance their exhibition mounting skills, it also gives them a real opportunity to defend their work within a critical situation with the public and their peers."

Most of the artists featured in the exhibition have just started their postgraduate studies, with the Master of Fine Arts students doing their degree by coursework which is mostly studio work.

The Master of Arts degree was more in keeping with the traditional approach to the masters in a university where there was thesis as well as studio work, Mr Armstrong said.

The show would feature work in progress which gave students the chance to carry the assessment of their work back into the studio and develop their ideas. These were then likely to be exhibited in the next show, he said.

He is hoping for a large public turnout to the free exhibition which will be open from 9am to 5pm Monday to Friday.

"You can always tell how popular a show is by looking at the number of nose prints on the windows and we usually have a fair few of those," Mr Armstrong said.

That is hardly surprising given the striking work of Master of Fine Arts students David Clark and Leigh Camilleri.

Both are working artists doing their MFA part-time.

Mr Clark, who is also working on the Warana Festival parade design, will exhibit his monumental work "Nietzche Disco".

Based on Frederick Nietzche's philosophy of eternal recurrence, with the idea that everything has been done before, Mr Clark's work expresses the theory that if this is the case then all an artist can do is repeat what has already happened ad-infinitum.

"Blam (a word repeated continuously on the art piece) is a kind of an extremity point that keeps getting hit in an attempt to knock down that final wall," Mr Clark said.

"Yet they are all hand-painted and quite different and that becomes an antidote to the philosophic problem of nothing ever changing. I am saying that nothing really does recur quite the same way."

Ms Camilleri has been exploring computer imagery for the past three years and this computer/technology interest is reflected in her work.

Her work is based on the finer lines and forms which occur in monolithic rock formations, investigating the microcosm versus the macrocosm, the tactile and intimate versus the monolithic and distant.

"Generally I tend to work with large forms which create an environment rather than a piece you would look at on a wall, something that encompasses the viewer rather than something you actually stand back from," Ms Camilleri said.

Ms Camilerri said she had started on the complex and time-consuming process by taking photos of giant rock formations at Deep Water Creek and then manipulated the photographs with mud poured over them which were then taken through a mechanical four-colour process.

Ms Camilleri said that despite all the work so far for the exhibition, her piece was still in its infancy and could go in a myriad of directions.

Artist David Clark

Genius of da Vinci on display

THE *Leonardo da Vinci: Models of Genius* Brisbane exhibition featuring 23 scale models of some of Leonardo da Vinci's greatest engineering inventions will run at the Queensland Museum Sciencentre until October 2.

Opened on Monday, August 7, the exhibition has been organised by QUT.

Originally set-up by the University of Technology Sydney, exhibitions have been held at Curtin University of Technology in Perth, University of South Australia and Royal Melbourne Institute of Technology.

All are part of the Australian Technology Network (ATN) of which QUT is also a member.

The scale models, commissioned by IBM and based on Leonardo's original 15th century drawings, feature a helicopter, clock, flying machine, parachute, paddle-wheel ship, printing press, steam gun, triple-tier machine gun and military tank.

All the models of this interactive exhibition have working parts and can be moved or manipulated by visitors to see how they work.

QUT Vice-Chancellor Professor Dennis Gibson said the exhibition would bring Leonardo's extraordiary inventions to life.

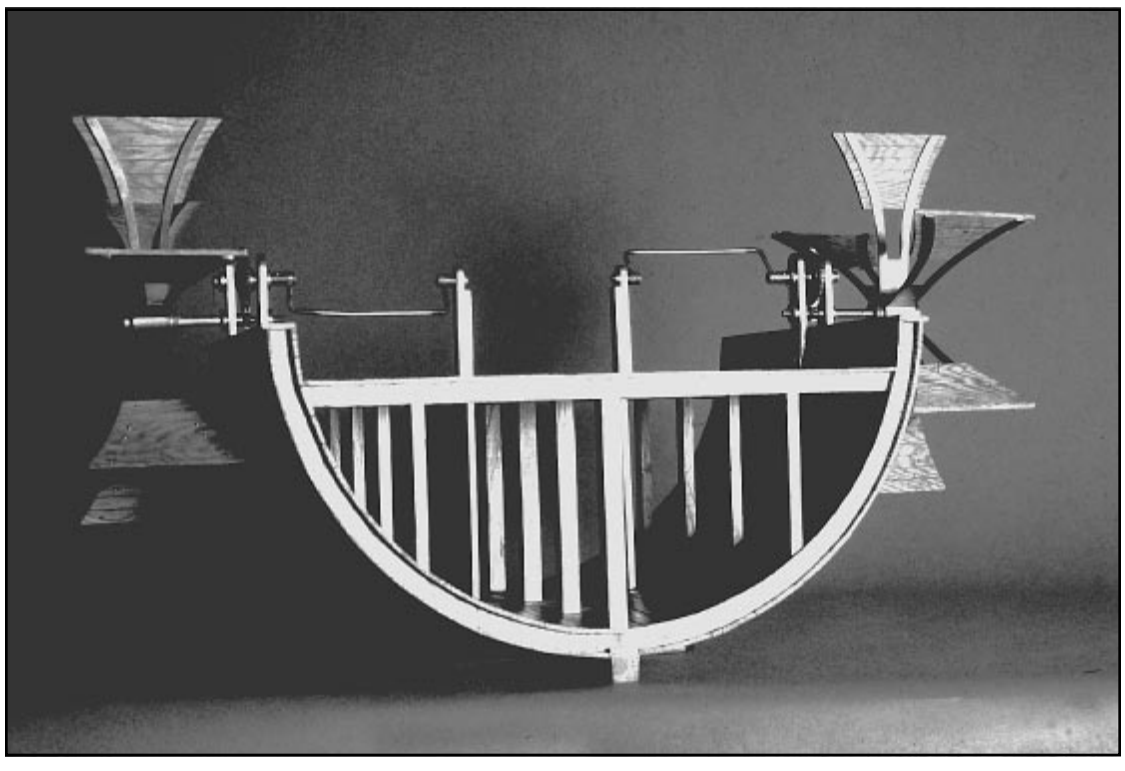
"The helicopter, the parachute, the machine gun, air conditioning , all these technological commonplace of the 20th century were anticipated in Leonardo's plans and drawings," he said.

"QUT prides itself as a university for the real world and has a tradition of teaching and research with highly practical outcomes, particularly in technological disciplines.

"With our recent expansion into areas such as education and the humanities, the university has opened up possibilities for continuing the tradition of Leonardo in creative interaction between the arts and sciences."

The exhibition is open every day between 10am and 5pm. Admission is $5 for children and $7 for adults.

(Above) Da Vinci designed this ancestral version of the tank to carry heavy fire power and be driven by men working the enclosed wheels with cranks.
(Below) Three centuries before the steam-powered paddle wheeler appeared, da Vinci designed a paddle wheel ship.



New design perspective for Japanese students

EIGHTEEN architecture/design students from the Gifu Women's University in Japan visited QUT in early August to be tutored in architecture from a south-east Queensland perspective.

The project was initiated by Gifu Women's University teacher Professor Michiyo Nakano who visited QUT 18 months ago.

"She obvioulsy liked what she saw," Associate Professor Gordon Holden of QUT's School of Architecture, Interior and Industrial Design said.

"She asked if we could run special design subjects for her students and has accompanied them on this trip."

Managing the design workshop for the GIFU students was graduate Anne-Maree Ruffles, who taught in Japan for three years. She was assisted by another graduate Megan Boyland.

The group was tutored during their stay by PhD student, Anoma Kumarasuriyar.

Architecture was not taught in the same way in Japan as it was in Australia, Professor Holden said.

"Over there it has a whole different structure. In the way they teach all areas are linked. They go through a number of tiers before focusing on architecture.

"These students are in their third year, but haven't as much architecture training as our third-year students.

"The exercise we developed for them was the design of a beach house in south-east Queensland.

"In preparing them for that we took them on a field trip to the near-north coast after an introductory talk about qualities of the Australian tradition."

The group visited a number of outstanding and contemporary examples of Queensland houses, including homes that had won national and state architecture awards, Professor Holden said.

"They were also taught the 'science' of architecture in respect to designing for climate - issues of orientation and breezes.

"They also went to the Gold Coast and saw some interesting contemporary designs down there. "

At the end of the two-week period the students had to submit their individual designs.

A number of people, both students and practising architects, had worked with the group during their visit, Professor Holden said.

"We tried to expose them to range of views and different people as well as have a core of people who they could relate to while here.

"They received a very high level of tutoring.

"The visit could possibly be the beginning of something of a long-term nature of reciprocal study tours," Professor Holden said.

Some of the Japanese students, once discovering that QUT was a top teaching university in Australia last year had asked "how to get in, how much does it cost", he said.

"We may get some of those students back. We hope they might come again and that we might be able to visit them," Professor Holden said.

Japanese student Naomi Sakane said she learnt the importance of climate and topography in the design of houses for the first time at QUT.

"It was a wonderful experience to visit Australian houses. I was surprised to see how different they are from Japanese houses."

Maeko Miura said it was very interesting to meet and learn from Australian architects.

"I think the opportunity to see a presentation by Australian students was the most interesting experience."

Chinese urban planners (l-r) Lingbin Kong, Professor Tong Wu (QUT), Mingrui Yang and Lu Qin

Course for Chinese urban planners offers potential

A SHORT course for Chinese urban planners which was launched in July will allow for greater exchange between professionals and the potential for "urban export".

Acting Dean of the Faculty of Built Environment and Engineering Professor Tong Wu said the course, the first of its kind in Australia, would demonstrate how planning was undertaken at various levels.

He said the objective of the course was to provide practising urban planners from China with a detailed insight into the operation of planning and urban development in Australia.

"Such a knowledge is likely to be highly valued as China continues in its transition from a command economy to one which has many of the attributes of a market economy," he said.

Professor Wu said that by hosting the course, the School of Planning, Landscape Architecture and Surveying hoped to further professional exchanges between China and Australia, as well as provide assistance to the export of Australian expertise.

"Urban export is one of the strategies of the Commonwealth Government and this type of course has a great deal of potential to promote that type of strategy."

The course is being conducted with the cooperation of the China Academy of Urban Planning and Design and has received financial assistance from the Commonwealth Department of Housing and Regional Development as well as the private sector.

The participants, seven men and three women, are from the major coastal cities of Beijing, Shanghai, Beihai, Fuzhou, Xiamen, Guangzhou and the historical cities of Luoyang and Xian.

"These cities are all experiencing massive urban growth as the Chinese economy continues to experience rapid expansion and restructuring. In this respect, the high growth rates of south-east Queensland will provide a useful comparison," Professor Wu said.

As part of their three-month course, the students, ranging in age from 25 to 37, will take an extended field trip to interstate locations and be placed in local planning offices.

In a lighter moment at the launch, the students also gained a lesson in the politics of planning in Australia, although the subtleties of politics Queensland-style seemed to be a little lost on the group.

Vice-Chancellor Professor Dennis Gibson explained to the students that planning in western nations like Australia had become highly political and our State Government had come close to losing power, largely because of a tollway.

But if the looks of bewilderment were anything to go by, this was a completely foreign concept for the students who all speak good English.

Professor Wu said later he didn't think the students, who had never been outside of China, understood the concept.

"I think that would be totally strange to them. They couldn't understand that yet; but I think that's the kind of message we need to give to them, not just the technical aspects, but how planning has many aspects in our system," Professor Wu said.

"Planners may claim decisions are technical, but they are also economic, social and political."

Student leader of the group, 37 year-old Mingrui Yang from the Xi'an Urban Planning Bureau, said he hoped to pick up professional and management techniques he could take back to China.

"I also hope to gain a greater knowledge of computer systems used in planning in Australia and I would like to improve my English as well," Mr Yang said.

German student exchange program proves popular

MORE QUT students are preparing themselves for university life in Germany following the expansion of the German exchange student program.

The School of Humanities hosted its first-ever "Tübingen Exchange" lunch on the Carseldine campus on August 4.

Dr Adam Shoemaker, the school's coordinator of International Programs and Dr David Scott, lecturer in German, arranged the lunch as an opportunity for Humanities students majoring in German to meet visiting exchange students from the 600-year-old University of Tübingen in southern Germany.

"This semester at QUT, Elke Widmann and Martin Breidt are visiting from Germany, taking units as varied as Computer Science and Australian Women's Writing," Dr Shoemaker said.

"Already one QUT student, Carly Watt who is completing her BA (Humanities) majoring in German and Applied Ethics, has finished a semester in Germany, for which she will receive full academic credit."

Ms Watt said Australia was very popular in Germany and many people she met at Tübingen referred to it as their "dreamland".

She said at the same time, the German experience was a dream come true for her.

"It was amazing to be in a town where the university is the central focus point," Ms Watt said.

Dr Shoemaker said that in the next few weeks, three more QUT students — Alex Goodyear, Danielle Hart and Roberta Ward — will leave for Germany and a fourth, Bonnie Williams, will follow early next year.

He said all had received travel bursaries from the School of Humanities to offset their overseas costs.

"Since we teach four languages in the school, German, French, Indonesian and Japanese, we are particularly aware of the need to expose our students to the cultures that go with those languages," Dr Shoemaker said.

"By far the best way to do that is to enable students to have in-country experience — there is nothing else like it."

The Tübingen exchange was originally set in place through the far-sightedness of Professor John Gough, of QUT's Faculty of Information Technology.

Dr Shoemaker said although initially set up to cater for students in Computing Science, demand had increased to an extent that German students were now enrolling at QUT in areas such as Australian Studies, English-teaching and Physical Education.

He said the school also saw the interchange of students as an important part of its international mission.

For further information on QUT's German language program, contact Dr David Scott on 3864-4543.

German exhange students Carly Watt and Martib Breidt

Appointments

QUT librarian Jan McNicol has been endorsed as a delegate to the Australian Council of Trade Unions biennial congress in Melbourne from September 26 to 28.

Ms McNicol, a backlog project cataloguer at Kelvin Grove, has been endorsed by the State Public Services Federation of Queensland.

She is presently a member of QUT's working party on absenteeism which is an element of the university's enterprise bargaining process.

* * *

Dr Erhan Kozan from the School of Mathematics has been elected chair of the Queensland Branch of the Operations Research Society of Australia.

He said his goal during his term was to expand community understanding of the role of operations research.

"Operations research is the application of scientific method to problems concerning the management of systems of people, machines, materials and money in industry, business, government and defence," he said.

Dr Kozan has served as secretary of the Queensland branch for the past four years.

* * *

Lecturer in Occupational Health and Safety at QUT Ms Margaret Cook has been elected President of the Queensland Division of the Safety Institute of Australia.

Ms Cook, who has just been awarded her masters degree in Health Science (Occupational Health and Safety), received the 12-month appointment at the annual general meeting of the SIA on July 5.

Brisbane theatre identity directs student production

QUT Academy of the Arts final-year students are being directed by Brisbane theatre identity Jennifer Flowers in the upcoming academy production of *Dangerous Liaisons* due to open at La Boite on September 1.

It is Ms Flowers' first production with the academy as director.

"The play is complex and demands a heightened stylistic approach which I enjoy working towards," she said.

"I think the audience will enjoy the language used and the terrific plot.

"All the students have been tremendously keen and committed, eager to make their contribution to the conceptual ideas behind the production."

Dangerous Liaisons, written by Christopher Hampton, has been described as a deadly but delicious game of seduction set against the backdrop of a strictly organised French society of manners, etiquette and the ultimate war of the sexes.

"This production of *Dangerous Liaisons* aims to illustrate the hypocrisy and shallowness beneath the glittering veneer of aristocratic society in the late 18th century," Ms Flowers said.

"As well, woven throughout the production, is a servant character representative of the gathering storm clouds of revolution, which occurred soon after the time in which the play was set."

Designer Bill Haycock said the central design inspiration for the production came from the work of the English artist Francis Bacon, particularly his paintings of isolated figures in cage-like spaces.

"Other useful imagery included photographs of empty public spaces — hotel and theatre foyers and museums — places where human behaviour can be observed," he said.

When the season closes, Ms Flowers will continue with the academy for a while as an acting tutor.

Dangerous Liaisons will run from September 1 to 9 with performances at 8pm. Ticket prices are $15 adults, $12 groups, $10 concession and $6 school groups.

Bookings can be made through Dial'n'Charge on (07) 3846 4646. Matinee bookings for September 6 at 10am and September 9 at 2pm can be made on (07) 3864 5998.

Seminars and courses

THE Centre for Community and Cross-cultural Studies is presenting the following seminars on Thursdays between 9am and 10.15am in room L201, Liberal Studies Building, Carseldine Campus:

* August 24 - Dr David Kendall (Sociology, QUT), *Good cop/Bad cop: Forms of colonial governance*;
* August 31 - Dr Cynthia M Webster (Sociology, UCLA), Topic to be announced;
* September 14 - Ms Barbara Adkins (Sociology, QUT), *What is aesthetic legitimacy?;*
* October 5 - Ms Catherine McDonald (Human Services, QUT), *De-institutionalised or re-institutionalised? Developments in the non-profit sector.*
* October 26 - Dr Barrie O'Connor (Human Services, QUT), *Interpersonal and interagency teamwork: a qualitative study.*

* * *

The Information Security Research Centre is presenting a seminar entitled *PhD Research in the ISRC* at 10am, Tuesday, August 8 in the DTSC Seminar Room, level 12 ITE Building, Gardens Point Campus.

The seminar, to be presented by PhD students from the centre, is an opportunity for attendees to keep up to date with the centre's research activities.

* * *

The QUT Academy of the Arts will conduct acting workshops for high schools students during the September school holidays.

There will be two separate workshops, one for students in years eight, nine and 10 and another for students in years 11 and 12.

For information on course content telephone Mark Radavan on (07) 3864 3230.

For information on enrolment and payment telephone (07) 3864 3684.

* * *

People interested in bird life in Moreton Bay can enrol for a three-day course offered by QUT entitled *Introduction to Waders (shorebirds) in Australia and Moreton Bay* to be presented on October 4, 15 and 18.

The course includes a field trip to the Boondall Wetlands Environment Centre at Nudgee Beach.

Enquiries about course content should be directed to Diana O'Connor on (07) 3369 8154.

Information on enrolment can be obtained by telephoning (07) 3864 3222.

More Caboolture trains

BRISBANE'S northside QUT students and staff can catch a train on the Caboolture to city rail line at least every 30 minutes.

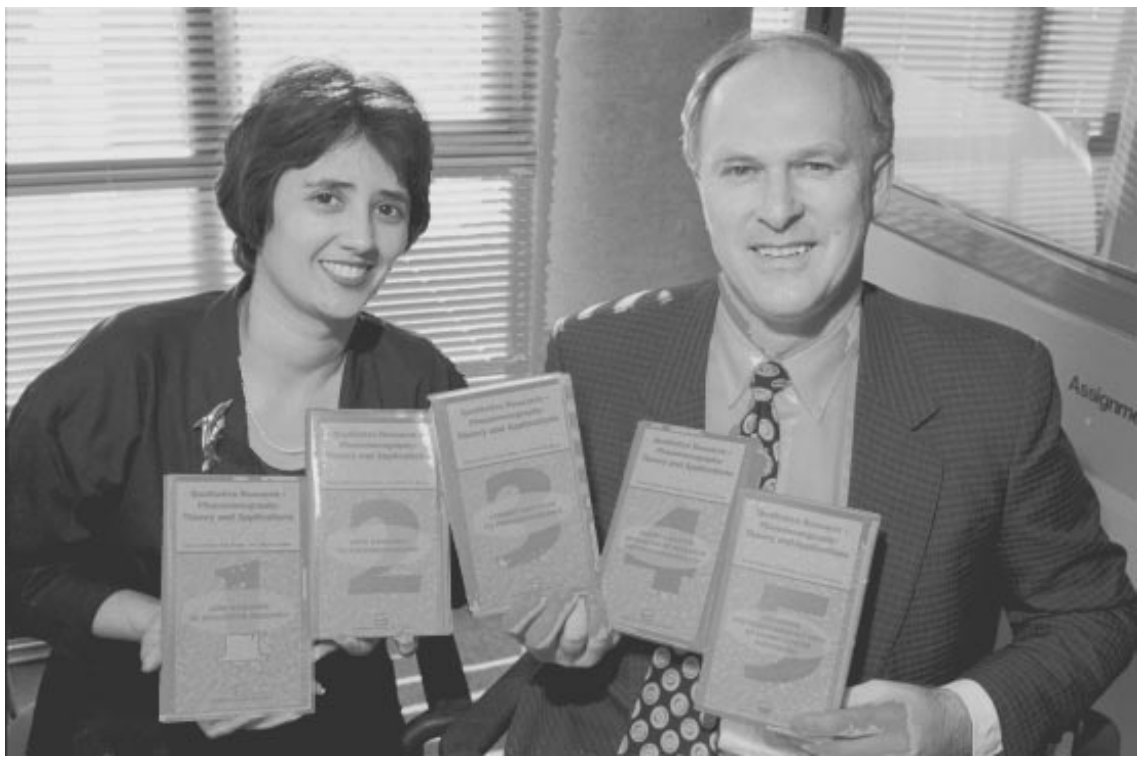
Carseldine Campus Registrar Ms Elaine Harding said that the Caboolture line trains are were also more frequent in the 6.30am-8.30am timeslot.

This timeslot has a number of trains leaving Caboolture l.ess than 10 minutes apart for the city.

The Carseldine train station is staffed from 5.30am to 1.30pm Monday to Friday. The Carseldine campus also has a frequent Brisbane City Council bus service. The first bus from the city leaves shortly after 7am arriving at campus about 7.40am.

Three bus routes 502, 442, and 202 service the campus.

More detailed information can be obtained from the relevant rail and bus authorities.



Christine Bruce and Professor Rod Gerber…producers of the video series on phenomenography

Tapes give voice to research

WHAT is phenomenography? That's not a bad question given that about two dozen people recently turned out for the launch of a video series produced by QUT on the subject.

Launched by Dean of the Faculty of Education Professor Alan Cumming, the series of five tapes deals with the various methods of qualitative research theory.

The series was produced by the Head of the School of Social, Business and Environmental Education Professor Rod Gerber and lecturer in information systems Christine Bruce.

Professor Gerber said the video series was for researchers and students who wished to understand the history and potential of qualitative research and phenomenography.

He described phenomenography as a qualitative method of research which attempted to gain answers from the experience of people through their voices.

"We have taped interviews with four of the world's leading qualitative researchers who were out here from Sweden recently on an official exchange agreement," Professor Gerber said.

The tapes are available through the faculty's Centre for Applied, Environmental and Social Education Research (CAESER) at $100 for the set, or may be bought separately.

Action research book launched

A HANDBOOK for students, teachers and adult and workplace educators outlining the strengths of action research has been published by the School of Curriculum and Professional studies.

Author Dr Mervyn Wilkinson, who lectures in curriculum and professional studies, said the book focused on action research as a tool for managing change.

"Action research is a method of doing things about real world problems or goals," he said.

"It is a way of action that spirals through processes of questioning, planning, implementing and reflecting about particular projects or issues in continuing cycles of personal growth and organisational development and change.

"It is used in industry, schools, community organisations, the public service and private institutions ."

He said the book was written in a personal, accessible style and was of value to a broad audience. The book can be purchased from the QUT Bookshop for $6.90.

QUT academics to star at conference

QUT academics will be well represented at a social justice conference in Brisbane early next month.

The theme of the two-day conference *From Practice to Vision* has been organised by the Valley School Support Centre.

The keynote speaker at the conference, to be held at Lennons Hotel on September 8 and 9, will be QUT Adjunct Professor Stephen Kemmis.

Professor Kemmis is a well-known writer and scholar in the fields of social justice, action research and critical practice in education.

The conference will also hear addresses by QUT staff from the faculties of Law and Education.

Assistant director of the Centre for Mathematics and Science Education Dr Bill Atweh will deliver an address titled *"The Inala Project — Students as Researchers to Enhance Tertiary Options"*.

Director of Justice Studies Associate Professor Simon Petrie will speak on *"Peacebuilders: A Social Justice Curriculum for the School, Home and Community."*

Justice Studies lecturer Scott Beattie's topic is *"Mediation — An Inclusive Process"*.

Classifieds

CHORAL SINGERS WANTED:
Rehearsals for Concert at City Hall are to start immediately.For further information please contact Spencer Faulkner on (07) 3886 6483 or Lynne Woollard on (07) 3864 3211.

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Cassandra Burgess ... handicap of six

Guild goes fishing for good golfers

THE recreation manager for QUT's Student Guild is on a fishing trip and hopes to attract a couple of "*sharks*" for a national university competition next month.

The would-be sharks, the two-legged type, are QUT students with a preferred golf handicap of less than six.

Dennis Cook is one of the coordinators of this year's Australian Universities Sports Federation Golf Championships to be held in Brisbane.

QUT will, for the first time, host the championships to be played on four golf courses from September 24 to 29.

"Invitations have gone to all members of the federation, about 52 universities throughout Australia, and between 160 and 200 golfers are expected to compete," Mr Cook said.

He said QUT was in the process of selecting golfers to represent the university in the championships.

Individual universities are allowed two teams, men and women, with seven players in each team.

Previous university golf championships had shown an excellent high standard of play, Mr Cook said.

This year would be no exception. He expected strong competition and wanted QUT to field its best golfers.

There was still time for "the cream of the QUT student golfing fraternity to come to the surface" and contact him, he said.

One player, already assured of a place in the women's team is second-year Bachelor of Nursing student and QUT's high-profile university golfer Cassandra Burgess.

Ms Burgess, who has a handicap of six, took out the Australian Women's University Championship hosted by the Southern Cross University in Lismore.

Registration of players begins on September 24 at the Gardens Point campus at 2pm, followed the next day with a practice round at the Indooroopilly Golf Course.

The first round of the 54-hole stroke play begins on September 26 at the Nudgee Golf Course (south course), with the second round on Wednesday at the Indooroopilly Golf course and the third round at the Pacific Golf Course on Thursday, September 28.

The match play final and the presentation of trophies will be held at the Brisbane Golf Course on Friday, September 29.

Mr Cook can be contacted on (07) 3864 1213.

Pump Heart Week to focus on teenage use of steroids

THE increasing use of steroids by young people will be the focus of Pump Heart Week at QUT from September 4 to 9.

With recent data from a survey of Victorian secondary-school students showing steroid use by four percent of males in years 9 to 11, QUT Health Services hope to convey some timely information on steroids.

Nurse practitioner at Kelvin Grove campus Shaynee McMahon said that while the student guild held Pump Heart Week every year, QUT Health Services had decided to collaborate with the week to highlight the issues related to the use of steroids.

"It is being found increasingly that first experience with steroid use is occurring at about the age of 17 or 18 because there is such a focus on body image at this age," Ms McMahon said.

She said research had also shown a large increase in experimentation with steroids.

But rather than take the big stick approach, Ms McMahon said the week would focus on a range of heart " issues" and look at the adverse effects of steroids while aiming to provide more information to help people make informed decisions.

"Although steroids are available legally from doctors on prescription, it has become increasingly common for users to obtain their supplies on the black market for non-medical reasons," Ms McMahon said.

She said steroid use tied into Pump Heart Week because they caused an increased lipid, or fat, concentration in the blood which put added pressure on the heart.

The combined promotion with QUT Health Services, QUT Student Guild Fitness and QUT's Drug and Alcohol Committee would also raise money for the Heart Foundation."Pump Heart Week will coincide with the National Alcohol and Drug Awareness Week.

While activities will be held throughout the week (see list below), the focus will be on two special days on September 5 at Kelvin Grove and September 7 at Gardens Point..

These days will feature fitness displays, cholesterol-testing and risk-assessment carried out on a one-to-one basis at Kelvin Grove by Ms McMahon and nurse practitioner from Gardens Point Carolyn Angus.

There will also be a seminar on body-building, steroids and the heart presented by Dr Anita Green who takes a special interest in sports medicine. Dr Green works for Health Services at Kelvin Grove.

"We will be looking at heart fitness, doing cholesterol-testing, looking at weight control and general wellness to assess risk factors," she said.

"We're also tying up with Spotless Catering who are doing 'healthy heart meals' during that week and the Drug and Alcohol committee will put together a package looking at what steroid use is and harm-minimisation.

"There will be aerobic displays, bench pressing competitions and other events to raise money for the Heart Foundation," she said.

■ **The QUT student fitness centres in association with the QUT Health Service are running a number of special events during the National Heart Foundation's Pump Heart Week from September 4 to 10.**

1995 Pump Heart Week events include:

SATURDAY, September 2 — Breathe Easy Swimathon, Sports Centre (GP);

MONDAY, September 4 — aerobic marathon, 11am to 1pm (GP & KG);

TUESDAY, September 5 — market day display 12pm to 2pm (KG):

Advice from health professionals on all aspects of health and fitness; cholesterol testing/risk assessments; 'Bench your weight' competition; aerobic display;

Seminar by Dr Anita Green titled *Body Building, Steroids and the Heart* 6pm to 7pm, aerobics room (KG);

WEDNESDAY, September 6 — City Heart Promotion, Queen Street Mall, promotional stall/aerobic display;

THURSDAY, September 7 — market day display 12pm to 2pm (GP):

Advice from health professionals on all aspects of health and fitness; cholesterol testing/risk assessments; 'Bench your weight' competition; aerobic display;

Seminar by Dr Anita Green titled *Body Building, Steroids and the Heart* 6pm to 7pm, aerobics room (GP);

FRIDAY, September 8 — Male-only step class - cross-centre challenge with KG and GP competing to see who gets the most guys;

SATURDAY, September 9 — Pump Heart power walk, 9am (GP) followed by a hearty breakfast;

SUNDAY, September 10 — Pump Heart monster step class, 5pm (GP).

World-team selection

EDUCATION student Gail Miller (above) represented Australia at the inaugural World Junior Water Polo Championships in Quebec in July.

Ms Miller, 18, was selected for the Australian women's under-20 team which was placed second to Holland in Quebec.

Eight of the world's top junior teams competed in the championships.

At the conclusion of the tournament, Ms Miller was selected for the world under-20 women's team, an all-star team nominated by the championship judges.

Following her success in Canada, Ms Miller travelled to Europe as a member of the Australian women's open team which competed in tournaments in Italy, Greece and Hungary.

QUT **Inside QUT**

Queensland University of Technology Newspaper

Publication details

Inside QUT has a circulation of 15,000 and is delivered to the Gardens Point, Kelvin Grove and Carseldine campuses, and the Sunshine Coast Centre in Nambour.

The newspaper is also circulated through business, industry, government and the media.

If you know of a story which should be told in *Inside QUT* contact the Public Affairs journalists:

Trish Pennicott (ed)	3864 2361
Mary Viscovich	3864 1150
Tony Wilson	3864 2130
Noel Gentner (p/t)	3864 1841
Facsimile	3210 0474

Letters to the Editor are also welcome (maximum of 250 words).

Media may reproduce stories from *Inside QUT*. Each story has been checked with the source prior to publication.

Published by the Public Affairs Department, QUT (M Block, Gardens Point), GPO Box 2434 Brisbane 4001.

Photography: Suzanne Prestwidge

Advertising: The Media Workshop, ph (07) 3391 6633.

The opinions expressed in *Inside QUT* do not necessarily represent those of the university.

Deadline for next issue (Sept 5) will be August 25.

Seniors still up and running

QUT facilities, staff and students will play a major role in this year's Seniors' Games to be held next month in Brisbane.

The theme of the games is *Elderly People Do Not Have a Use-By Date*, and in part, the games will replicate the program for the forthcoming Sydney 2000 Olympic Games.

An estimated 300 elderly citizens will compete in the Seniors' Games being organised by QUT, the Home and Community Care Organisation and St Andrew's Hospital.

A driving force behind the games is Lynn Clark, a coordinator of the St Andrew's Respite Day Centre at Windsor..

Mrs Clark said the average age of the participants would be about 80 years, with a number of individuals in their early 90s.

She said one of the prospective competitors from the Windsor Centre had said, "Best thing about the games is that it will get us off our butts and doing something."

The games will have events modified to suit the elderly participants and will be held at the Kelvin Grove campus oval on September 14.

Competitors in the games will be drawn from the majority of respite care centres and senior citizens' organisations between Caboolture and Beenleigh.

One of the organisers of the games, School of Nursing senior lecturer Rob Thornton said the school would need to contribute more than 250 nursing students to assist in the care of the participants.

He said the School of Nursing had had an association with the St Andrew's Respite Centre over the past three years providing nursing students to accompany senior citizens on day outings and holidays.

"The School of Human Movement Studies is assisting in the planning and organisation of the sporting events and a special rendition of *Advance Australia Fair* will be sung by the students of the Faculty of Arts, School of Music," Mr Thornton said.

"Logistics regarding transport have been negotiated with the Brisbane City Council.

"Kelvin Grove Campus Registrar David Spann has provided parking arrangements for the day and the organisation of staff to assist with crowd control."

The games will be officially opened by the Governor of Queensland Leneen Forde at 10am, Thursday, September 14.