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August edition

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Vice-Chancellor's Column



Funding of research and research training is an important topic at the moment, and one that I wish to highlight again in this column.

The Green Paper on research and research training will be the subject of major discussion at our 1999 Education Profiles meeting with the DETYA team when they visit on Tuesday, 21 September. In addition, there will be some opportunity for discussion on student load, capital management, financial management and equity/indigenous/quality issues, which form the regular agenda for such profiles meetings.

The discussions this year will have major significance for the higher education sector overall, and will set the scene for the future of research and research training within Australian universities. The strong implication from the funding policies discussed in the Green Paper: *New Knowledge, New Opportunities* is that Australian universities are primarily involved in research through their research training role. This is reflected in the proposed single formula for distributing around \$465m of Institutional Grant Scheme (IGS) funds, which are derived from the existing Research Quantum (\$221m), Small ARC Grants (\$28m) and a 'share' of the 'research training component' of the Operating

Grant (including a pro-rata amount of the capital roll-in) of \$216m.

The Green Paper proposes that from 2001, the IGS funds will be allocated on the basis of higher degree research (HDR) load weighted at 60 percent and research income from all sources weighted 40 percent. These weightings do not adequately reflect the roles for staff (teaching and research academic and general staff; research only academic and general staff) conducting research within the University, particularly in areas that do not have strong cohorts of research students. I hope that through discussion DETYA will be persuaded to not only change the existing weightings, but to incorporate other measures that take account of research outputs, such as research student graduations, publications and other outputs.

The second major block grant, called the Australian Postgraduate Research Student Scheme (APRSS), is to be funded from a portion of the Operating Fund notionally provided for the training of HDR students. This is estimated at \$545m in 2000. The Research HECS Exemptions and Australian Postgraduate Awards (APAs) are proposed to be allocated by a formula: HDR student load (40 percent); HDR completions, with PhD completions weighted three to

one in favour of Masters completions (20 percent); and the Composite Index, excluding the HDR completions component (40 percent). There are many issues that require clarification concerning the allocation process. These include those relating to time limits for completion of HDR programs (the proposed maximum duration for PhD and research Masters degrees of three and a half and two years are problematic); transferability of places after one year, given the limited lengths for funding of the degrees; the number of places to be funded for the system overall, and for the University; and the intrusive nature of the whole process, which challenges our autonomy and setting of strategic goals and targets for expanding our HDR activities.

In contrast to the challenges of the Green Paper for the University, the reshaping and expansion of National Health and Medical Research Council (NH&MRC) support for research provide major opportunities for our researchers, and in particular for our joint Hunter Medical Research initiative with the Hunter Area Health Service. Professor Warwick Anderson, Chair of the Medical Research Council of the NH&MRC, announced major increases in funding above the current \$165m available in 1998/99. By

Aboriginal health on world stage

The role the University has played in training and supporting Indigenous doctors was given international exposure at a recent Global World Health Organisation/ UNESCO Conference staged in Arizona, USA.

Deputy Vice-Chancellor Professor Brian English, Professor John Hamilton and University representatives were invited to attend the Universities and Health of the Disadvantaged conference to present details on the outstanding success of the Faculty of Medicine and Health Sciences' Indigenous training program.

"The timing (of the conference) was highly appropriate given that it occurred just ahead of the recent release of figures on the status of Aboriginal health in Australia," Professor Hamilton explained.

The comprehensive selection and support process for Aboriginal and Torres Strait Islander medical students was introduced in 1985 and, since then, the University has graduated almost half of Australia's Aboriginal and Torres Strait Islander doctors. The reasons behind Newcastle's success can be attributed to four factors, according to Director of the Faculty's Aboriginal and Torres Strait Islander Student Liaison Office, Gail Garvey.

"Our specifically designed admissions process, the cultural support, community involvement and the inclusion of Aboriginal health curricula have all served to make our program a world leader," she said.

Ms Garvey, Professor Hamilton, Professor English, Associate Professor Laurel Williams and Newcastle University graduate Dr Ngaire Brown presented details on the Newcastle program to representatives from universities around the world who shared a commonality of experience.

"Of particular value was the contribution of those Indigenous colleagues who are responsible for the development and continuation of University activity in this field," Professor Hamilton said.

2004/05, NH&MRC funding will increase to more than double its current level, to \$345m, with increases of \$15.7m (1999/00); \$49m (2000/01); \$84.4m (2001/02); \$117.9m (2002/03); \$155.7m (2003/04); and \$179.9m (2004/05).

Moreover, the whole program is being reshaped to achieve three broad aims, namely increased knowledge and a better understanding of human health and illness; better translation of research funding into health care; and growth of knowledge

based industries, especially in biotechnology.

This is highly commendable on the part of the Health Minister and the Federal Government, and we look forward as a University with major strengths in medicine and health sciences, nursing, psychology and through our partners, the Hunter and Central Coast Area Health Services, in areas of clinical practice and health advancement, to the opportunities that will follow under these new arrangements.

Healing...
our way
"from little things big things grow"

An introduction to courses offered by the
**Faculty of Medicine and
Health Sciences**

Aboriginal & Torres Strait Islander
Students' Liaison Office

The UNIVERSITY
of NEWCASTLE

Healing...our way - recruitment materials for Aboriginal and Torres Strait Islander students

Readership survey

Thank you to all those who have responded to our survey in last month's edition. You showed excellent initiative and some detective skills in returning your completed forms as we forgot to tell you where to send them!

If you would like to return the survey form this month, please fax it to ext 6400 or to 4956 1869, or send it in the internal mail to The Editor, Uninews, Marketing and Media Services. Given this slight glitch, we will present the results of the survey in the September edition. Keep those forms coming!



Learning in the virtual classroom

More than 1,000 students from 20 courses across the university are currently learning in a "virtual classroom".

The use of web-based teaching techniques is diverse, with academics using home pages, discussion software, email lists and newsgroups to supplement their teaching. Many are using integrated packages - TopClass and FlexiComm - that allow students to view course materials, do tests and quizzes, take part in discussion groups and send email to each other and to their tutors.

These initiatives are being undertaken as part of the university's strategic planning objective to "provide flexible and accessible learning opportunities through the provision of high quality teaching and learning infrastructure integrating new technologies". A 1997 discussion paper on flexible learning* by a Steering Committee of the Teaching and Learning Committee said that failure to embrace flexible learning would be "a formula for missing out on opportunities for substantial and continuing growth in earnings" and "a recipe for gradual loss of students and funding".

While many of the university's courses have the potential to be competitive against offerings from other universities, the move to flexible delivery should be based on strategic analysis, the paper said. Faculties need to determine areas where flexible delivery will improve learning, such as areas with large classes; fields with the greatest market

potential for distance students; and fields in which collaboration with other universities is appropriate, the paper continued.

Flexible Learning Consultant, Jane Conway, said the decision to move third year nursing course materials into TopClass was based on pressures from within the profession. "Some studies have shown that nursing graduates are not being well prepared for the workplace," Jane said. "The system of practical placement that saw students do a 10 day block release in the workplace didn't give them time to capitalise on what the experience had to offer."

Replacing the block release with a full semester of working three days a week allows students to acclimatise to the workplace and to respond to being there on an ongoing basis. Putting the third year course materials online has freed the students to complete their studies without having to come to the campus at all.

The use of web-based learning environments raises a number of issues for both students and instructors, however. While it provides a standard, consistent environment with a range of functions, TopClass has been difficult to integrate with existing administrative systems. It is also expensive, costing around \$US7 per user per annum, so the university is keen to optimise its use.

Jane thinks it's important that people have realistic expectations of what the software can deliver. "People will say they are disappointed with TopClass but often it's not the software's fault. We are

caught in the development stage where we are still looking at the software products."

Two lecturers in the Department of English are using TopClass in a way that enhances their students' learning experience without relying on it entirely.

A/Professor Hugh Craig and Dr Tim Dolin teach an undergraduate course, *Text and Technology*, that examines the link between literary meaning and the technology of text production. The pair uses a variety of resources to teach the class including face-to-face seminars, written materials, a course home page linked to resource materials, and TopClass. Students create their assignments online in HTML programs.

"The technology is ideal for the course," Tim said. "We are looking at the relationship between technological forms and meanings and we want to try and test that theory in the assignments."

Assessment will reward critical thinking, however, and not competence with internet technology, Hugh promises. "TopClass gives students an additional medium for discussion so it can continue between our face-to-face sessions," he said. "Students can learn from each other."

A big issue for students is access to computers and support. While some Australian universities are considering proposals requiring students to own computers, many of them currently do not. Jane says 70 percent of third year nursing students surveyed have access to a computer off campus and that others can gain access through the workplace.

FlexiComm is a web-based learning program currently being trialled in the Department of Building and Construction Management. Swee-Eng Chen said that technical considerations had influenced his Department's decision to trial FlexiComm rather than use TopClass. "It is easy to use and putting course material on it is not problematic at all. What's more important is how we integrate teaching theory and practice with technology."

Building and Construction Management has offered distance education courses using mainly print-based materials for a number of years. The implementation of web-based learning will be gradual to allow their students to keep up.

Chen doesn't think there will be any quantum leaps in teaching across the web in the foreseeable future. "There was a faddish period when people thought it would take over the teaching function," he said. "But I think that was more hype than substance."

The Department of Aboriginal Studies is finding that Motet discussion software is facilitating important connections between their students and indigenous peoples in Canada and the USA. They see web-enabled communication as the future of tertiary education.

The Teaching and Learning Committee will be commissioning a review of available technologies to support flexible learning within the next few months.

*At <http://www.newcastle.edu.au/flex/flex.htm>

The meaning of life

What constitutes life? Does man have a soul and if so, what does it look like? These questions have occupied philosophers for centuries and yet they remain a mystery. A Spanish researcher currently visiting the Department of Philosophy is using a novel interdisciplinary approach to try to solve these age-old questions.

Dr Pedro (Kepa) Ruiz Mirazo, from the University of the Basque Country in San Sebastian (Donostia), Spain, is here to hold research discussions with members of the Dynamic Systems Research Group at Newcastle. Working in an area between chemistry, physics and basic biology, Kepa's research team in Spain is working on the problem of creating a protocell and then trying to gain some insights into whether or not such a created cell would constitute life.

"Extremes touch sometimes," Kepa explained of the unusual mix of science and philosophy. "A lot of physicists turn into philosophers when they retire but the clever ones do it before then."

Head of Newcastle's Philosophy Department, Professor Cliff Hooker, has done just that and thinks the

connection is very natural.

"Deep at the foundations of natural science, you run up against the large philosophical questions. What is the origin of life, are things really caused or are they random?"

Scientists can either make a series of assumptions about these questions and continue to work within that paradigm, or go deeper and investigate the big questions, Cliff said.

Much of the progress in this new field has been not in finding the solutions to philosophy's big questions but in focussing on what is relevant and what is not. Philosophers used to ask, 'is human life distinguished by a soul', Cliff said, but Kepa's research has led to two different and better questions:

- does life have a distinctive organisation of matter that is irreducible to anything less? and
- do the quantum fields that make up the fundamental nature of matter have soul-like qualities?

Having these two new approaches sharpens the 'what is life' question, Cliff said.

Kepa took part in a series of seminars in the Department of Philosophy during his eight week visit. He is particularly interested in the work of



Professor Hooker and fellow researchers, Dr John Collier and Wayne Christensen.

The Dynamic Systems Research Group is unique in philosophy and has attracted considerable international attention for their work. They have developed a new model of biological organisation and of intelligent organisation within that. They are working on applying these ideas to cognitive robotics, organisational economics, and industrial innovation.

"This is a unique group in philosophy anywhere in the world," Cliff said. "Five of its members have degrees in science as well as philosophy. Because of the fruitfulness of its ideas the group has been able to maintain research income and publication well above the average."

Kepa's visit is the first step of what is hoped to be an ongoing exchange between our philosophy department and the like-minded researchers of the University of the Basque Country.

New process for schools' funding

A method of identifying the needs of students with disabilities in NSW Government schools, developed at the University's Special Education Centre, is about to be used by the Department of Education and Training. Director of the Centre, Associate Professor Phil Foreman, said the funding process will support the education of students with special needs in regular schools by ensuring there is a more standardised method of allocating any additional resource requirements.

"The Department of Education and Training sought expressions of interest from New South Wales universities for the development of an appropriate procedure. The Department has been using a process that was internally developed, but they decided to contract a university to develop a procedure with known statistical properties," Phil explained.

By using the procedure, the Department will be able to individually assess what additional funding particular schools need to meet the needs of their students, using input from schools, parents, and district staff. "We've developed the procedure after an extensive search of relevant research. This has included examining similar processes that are already used in Australian school systems," Phil said.

Consultation with Department of Education and Training staff, teachers and special education managers has also been an important part of the development of the process. A spokesperson for the NSW Department of Education and Training said the Department was looking forward to using the process in all NSW school districts later this year.

The perfect job



staff profile

Stephanie Julienne, one of three new Marketing Managers in the International Development Office, admits her initial motive in applying for the job was a desire to escape the intense world of Canberra politics. Having worked as a media adviser to ACT Chief Minister Kate Carnell for nine months, Stephanie felt it was time to leave.

"It was very all-encompassing," she explained. "We often worked until 11 at night or later and I was on call for the media all the time."

When she began to feel that every pot hole on a Canberra street was somehow her responsibility and that she had no life outside her work, Stephanie began to look around for an alternative.

Despite having been born and raised in Canberra, the University of Newcastle was a place she knew about. Her sister is studying architecture here and one of her closest school friends came here to study engineering. So when she saw the job advertised on the internet she decided to apply.

But to her surprise, the job she came to turned out to be

more than just a convenient way to escape Canberra. She discovered that it is really perfect for her.

"It combines the two things that I strongly believe can make the world a better place – education and travel," Stephanie said. "Education gives people the tools to improve their lives and some of the best times in my life have been when I was travelling."

Stephanie thinks an important part of travelling is learning to appreciate that only a small minority of the world's population live in the privileged way we do in Australia.

Stephanie's belief in the value of education was passed on to her by her mother, a teacher, and stepfather, a mathematics lecturer. Her stepfather encouraged her to study politics and economics, despite her ambition being in journalism.

"It was great advice," Stephanie admits after completing her combined Economics/Political Science degree at the Australian National University in Canberra. "I did end up in a journalistic role with the Chief

Minister and I was able to fairly easily pick up the skills involved in writing a media release. It would have been much harder for me to learn the political and economic knowledge that I needed to understand the issues I was writing about."

One of the biggest issues she tackled while in that role was the struggle to sell the idea of privatising the ACT electricity company. She found herself putting out a media release a day to try and explain in simple terms the very complex economic argument behind the desire to privatise. Despite applying all her skills, however, the issue was voted down, as it has been in several states.

It wasn't the first time Stephanie had confronted a tough selling proposition. Before starting with Kate Carnell's office, she worked at marketing Canberra as a business destination while advising the ACT Department of Business, Arts, Sports and Tourism.

"When the Federal Government first came to power, they sacked around 10,000 public servants. Nobody in Australia feels sorry for Canberra and in some ways it does have a lot of advantages. But we needed to encourage private sector growth to provide a buffer."

Working with a strategy that used the tagline "Feel the power of Canberra", Stephanie and the marketing team attracted significant interest from overseas investors, despite the fact that Canberrans hated the slogan. They were so successful that there has been a dramatic turnaround in the ACT workforce from 60 percent being employed in the public

service in the early '90s to 60 percent now being employed in the private sector.

Stephanie thinks marketing the University as an overseas study destination is a much easier proposition. She looks after the Study Abroad and exchange programs area with David Wise concentrating on the Ausaid and scholarship students and the third Marketing Manager, Ron Nankervis, looking after relationships with overseas agents and other bodies.

"I think we make a terrific team. We each bring different sorts of experiences and skills, so there is a natural division that works well," Stephanie said.

While she grew up skiing in the Snowy Mountains, Stephanie is a beach lover and says Newcastle's lifestyle and natural attractions make it popular with overseas students. She believes that demand for study abroad will continue to increase.

"The world of work is becoming global and overseas study is now being demanded by many US employers. They see it as a way for their employees to gain some international exposure before they join the workforce."

Stephanie, who has been with the University for four months, has already travelled to Denver in the US and will travel to Europe and other parts of America in the next few months cementing arrangements and generating new ones.

"The more I discover about international education, the more I love it," she said. "Universities of the future will have people flying all over the place to study."

And Stephanie plans to be there to help them.

Efficiency and humanity can coexist

Information systems should be centralised like water, sewerage and power systems and the Hunter should be positioning itself to attract data processing centres, according to Professor Janet Aisbett.

Delivering an inaugural lecture to mark her appointment to the University's foundation chair of information systems, Janet said the move towards centralising information systems was inevitable.

"What I'm foreshadowing is information service companies providing total information processing, storage and communication services. You ask for projections of sales in Asia in a certain format, and you get them. You ask for your profit figures over the last five years, and you get them. You supply the raw data in a format that suits you, and most of that data are captured automatically for you."

Information service providers would be a logical extension to Internet providers and would relieve clients of the burden of trying to keep up

with rapidly changing information technologies, she said. They would also answer the problem of the shortage of information technology staff – estimated at 30,000 in Australia, 350,000 in the US and half a million in Europe.

The rise of application service providers that offer leased access to applications and storage space on their servers in the US and in Europe showed the trend towards centralisation, Janet said. Big business and governments are forming alliances in which the responsibility for information systems infrastructure, staffing and information delivery is with consulting firms joined with big information technology outsourcing firms like EDS or IBM.

The Hunter should explore the possibility of being the site for such data processing centres, along with hosting smaller specialist centres, Janet said.

"The Hunter has depth of experience in control systems and software from its manufacturing and mining base, and other areas such as

health," she said. "We have world-leading research in control and some of the support technologies such as sensing and artificial intelligence.... We need to harness the expertise we already have in manufacturing, transport, mining and health, amongst other things, and apply it to the new openings brought by information systems."

The move to centralise our information systems would not simply achieve efficiencies for us but has the potential to free us from our desk-bound lives, according to Janet.

"We could revert to the home or neighbourhood based forms of work we had before the Industrial Revolution," she said. "It is people, not technology, who are making information systems be used in old-fashioned ways."

"As the millennium draws to a close, it is time to take stock of the information systems developments that have put us in a position in which efficiency and humanity can coexist. It is time to harvest the efficiency gains of two



centuries. Time to care about the welfare of others, time to make artistic achievement and cultural enrichment more central to human endeavour.

"We can do this when information systems are a centralised, routine part of life, like water and sewerage and power systems."

Professor Aisbett delivered her lecture, *Big Brother or Sound Sense: the Centralisation of Information Systems*, at the Graduate School of Business lecture theatre in University House on August 6.

Holistic healing

A Harvard University study reveals that using holistic therapies such as music in hospitals reduces delirium by as much as 33 percent in patients 65 or over, and could shorten hospital stays and save millions of dollars in resources.

Churchill Fellowship winner Christian Heim, a fourth year medical student and Faculty of Music lecturer will build on these findings while exploring the use of music in hospital environments over a four-week period in Europe next year.

"Overseas, music is being researched for its intrinsic healing values," Christian said. "Through this Fellowship I hope to find out more about the important connections between music and healing, such as decreased sleep deprivation and cognitive impairment, and increased relaxation."

Christian plans to return to the Hunter to do his

own research and use music as a "springboard to a holistic approach to health", believing area hospitals are ripe for developing a more patient friendly environment.

"The University's medical degree screening process is already pioneering changing attitudes in medicine," Christian said, "seeking doctors who are caring and better listeners. That's why I think Newcastle will be open to considering what's happening overseas with music therapy."

Professor Robert Constable, Dean of the Faculty of Music, describes Christian as one of Australia's brightest young composers.

"Through his work he is showing that the combined forces of music and medical science are a powerful tool in aid of healing and creating wellbeing," Professor Constable said.

Viagra for vegetables

Who would have thought Viagra would become the agent to arrest the droop in fruit, vegetables and flowers?

In a world first, researchers in Food Technology at the Central Coast Campus under the guidance of Professor Ron Wills have discovered that a dose of nitric oxide can extend the shelf life of fruit, vegetables and cut flowers considerably. Nitric oxide is made available to the plant tissue when Viagra, the male virility pill, is dissolved in a weak acid solution and absorbed by the plant.

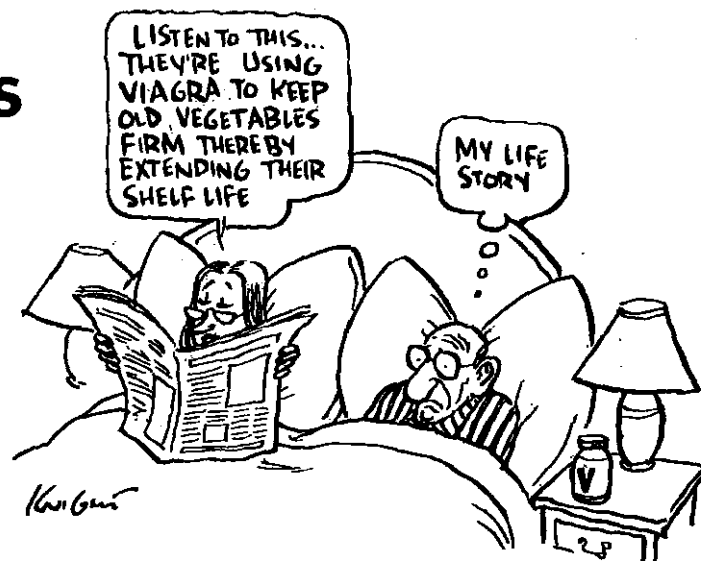
It is a discovery that has put a smile on the faces of the researchers.

"We've taken out patents on it," Professor Wills said.

The research is a joint project between his team and another under Professor Ya'acov Leshem of the Bar-Ilan University in Israel. Professor Leshem has visited the Central Coast Campus to keep up with its research, and Professor Wills has been to Israel to compare notes.

The project had its genesis in 1997 at a conference in Israel at which Professor Wills proved that ethylene, an aging substance produced by plants, reduces their shelf life even at extremely low concentrations. Professor Leshem, on the other hand, showed that nitric oxide, also produced by plants, had an opposite effect to ethylene. Excited by these discoveries, the two agreed to research ways to inhibit the production and action of ethylene by introducing enough nitric oxide to slow the aging process of vegetables, fruit and cut flowers.

Their respective laboratories worked on the problem and developed a process whereby they could treat items such as mushrooms, broccoli, strawberries, lettuce, beans and cut flowers, with nitric oxide for a short period and greatly extend their shelf life. They decided the gas was best administered in tablet form, and hence the connection with Viagra.



"We knew how Viagra worked, and no, it didn't come from our own bathroom cabinets," Professor Wills laughed.

Since his colleague in Israel issued the first media statements to Reuters, AAP and the rest, he has grown accustomed to the amused attention of the media. After all, the story has made headlines around the world and been picked up widely by press, radio and TV.

"Nitric oxide is well known for dilating blood vessels," he said, "it's been used for years in the treatment of asthma, for instance. By experiment we

found a good way to release it was by dissolving a solid, such as Viagra tablets, in a weak acid solution. It has almost doubled shelf life in some cases."

The problem with Viagra is that tablets cost nearly \$20 each on the commercial market.

"The challenge now is to produce the gas the way we want to use it at a much cheaper price. TUNRA is managing the patent process and we're talking to commercial partners with a view to producing such a tablet. We believe it can be done and that the cost will come down significantly."



PIPS (Personalised Information Portfolio Service), the University's unique website service, has been visited more than 2000 times since it went live in June.

An August review of the service, which rapidly delivers a precise package of information to potential students, showed that around 1000 users had completed the PIPS questionnaire and received a portfolio.

More than half of the visitors to PIPS were from Australia and of the remaining number, more than half were from the United States. Other visits have come from many different countries including the Netherlands, Canada, the United Kingdom, Hong Kong and South Korea. The current Nationalities list includes only the countries in which the University has an agent or local contact but this will be expanded to include most countries.

Enquiries from prospective Study Abroad students comprised around 10 percent of the total PIPS hits. Sixty two percent of users

PIPS proves popular

have been interested in undergraduate courses, with 28 percent wanting information on postgraduate study. Two thirds of visitors to PIPS are female.

Overseas visitors to PIPS were interested in the region, lifestyle and accommodation, while Australians made a greater number of requests for administrative information. Overall, the requests for information on classroom timetables, admissions and the Hunter Region outweighed requests for academic material.

Four percent of visitors provided feedback on the system, with no negative comments recorded. Most of them praised PIPS and many requested more information about admission procedures or courses.

The review, carried out by IESD, recommended that more information of interest to specific groups, e.g. articles about the achievements of currently enrolled overseas students, be harvested from existing publications and entered into PIPS. It also recommended that subsite managers carry out a formal review of PIPS and that feedback about the response of visitors to PIPS be given to faculties. Ownership of information offered by PIPS should be established and it should be reviewed twice a year, the review found.

Other recommendations included adding a Distance Education option to PIPS and linking PIPS to the Study Options subsite.

Keyboard Festival hits high notes

The Faculty and Conservatorium of Music's 1999 Keyboard Festival featured performances of Chopin by two internationally acclaimed pianists among its week-long schedule in August.

Richard McMahon, the Head of Keyboard Studies at the Welsh College of Music and Drama, delivered a lecture and recital on August 17. Richard gave his first BBC broadcast in 1971 and has since done more than 100 broadcasts for BBC Radio 3. Throughout his career he has maintained a balance between his life as a concert artist and his dedication to teaching.

Stephen McIntyre, Associate Professor in piano in the Faculty of Music at the University of Melbourne, who is recognised nationally and internationally as one of Australia's most eminent pianists, performed a Chopin recital on August 17. Stephen was awarded the prestigious Sidney Myer Performing Arts Award this year for his role as director of the highly successful chamber music program of the Melbourne International Festival since 1989. He has achieved many accolades in his musical career and is a founding member of Australian Chamber Soloists.

Mathematics also featured at the keyboard festival, as CSIRO mathematician Dr Bob Anderssen explained how instrument maker Wayne Stuart achieved the unique sound attributed to his highly acclaimed pianos.

It's all a matter of vibrations.

"A key feature of the new pianos," explains Wayne, "is the way the strings are coupled to the soundboard. The coupling design found in other pianos is as old as the piano itself. But we needed to know why the new coupling method gives the Stuart pianos such clarity."

Dr Anderssen has found out that the new coupling method affects the way the strings vibrate. By exploiting existing knowledge about piano sounds and string vibration, some of it over two thousand years old, Dr Anderssen was able to build a mathematical model of the way piano strings vibrate.

"The model reveals how, in standard grand pianos, the strings begin vibrating vertically but change to vibrate horizontally, parallel to the soundboard," he said. "This change to a horizontal vibration makes the sound less harmonious. But in the Stuart piano, the vibrations stay in the vertical plane because of the special coupling method implemented by Stuart. This gives a more harmonious and stronger sound."

The cream of national talent vied for prize money and prestige in the Keyboard Festival piano competition.

Performers included Li-Ya Dai, holder of the City of Sydney Piano Scholarship in 1995 and John Collyer, who won the University of Newcastle Piano Competition, the forerunner to the current event in 1995 and '96. Also competing was Liam Viney,

who won the 1998 City of Sydney Piano Scholarship and Greg Smith, holder of numerous University of Newcastle scholarships and prizes. The two Newcastle students, Smith and Collyer were selected to compete in the finals and came third and fourth respectively.

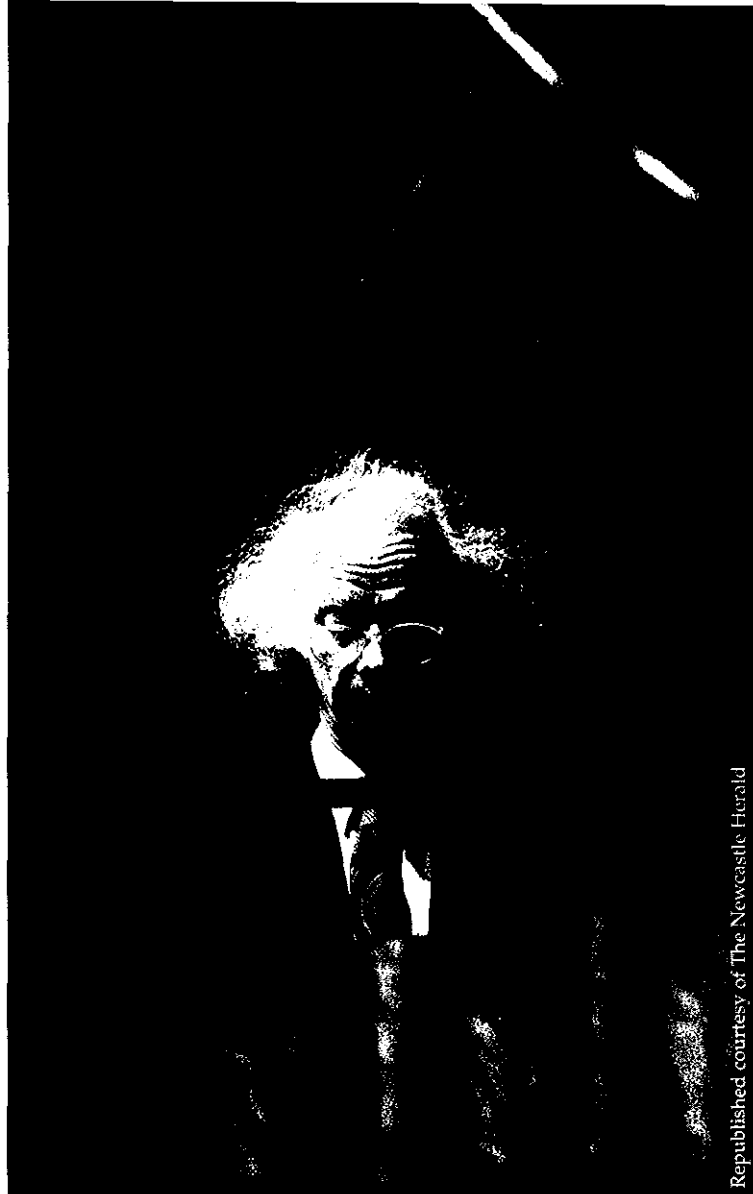
The winner, Grace Kim, came to Australia from Seoul at the age of nine after winning the National Junior Piano Competition. At 16 she competed in her first international piano competition in Italy. Grace has received many scholarships, the latest allowing her to study in London. In 1995, she was the state winner and national finalist in the Yamaha National Piano Competition. She is currently studying a Diploma

of Music at the Sydney Conservatorium. The prize of \$4,000 was presented by Rob Langley, OAM.

Dean and Director of The University of Newcastle Faculty and Conservatorium of Music, Professor Robert Constable, says standard of competitors was extremely high with the competition attracting an impressive stable of young pianists.

Professor Constable chaired the adjudication panel that included Nigel Butterley, Rachel Valler, Michael Kieran Harvey and Richard McMahon, head of Keyboard Studies at the Welsh College of Music and Drama.

Tim Dargaville, a young composer from Melbourne won the Jean Bogan Memorial Composition Competition.



Piano expert Stanley Hoogland from The Netherlands performing at the Keyboard Festival

Fine arts student, Rebecca Robinson has been presented with this year's prestigious Margaret Senior Award for Wildlife Illustration.

Rebecca was one of twelve wildlife illustration honours students who competed for the award, which was first presented in 1984 following a bequest by renowned wildlife illustrator Margaret Senior. The award is offered in collaboration with the National Parks and Wildlife Service, in honour of the University's dedicated wildlife illustration course - the only one of its kind in the country.

"It is a highly specialised course designed to produce people who support the natural history side of science," explained Senior Design Lecturer, Christine Sanders.

"We have art, design and science students from interstate and overseas who have heard about the course and its excellent reputation and made the decision to come here and study."

The \$1000 award is aimed at encouraging further study and research into the area of wildlife illustration. Chris said the award recognised Rebecca's talent and her potential to follow a career in this highly specialised field.

"The students are assessed on the basis of their artwork skills but also their ability and desire to pursue a career within the area of wildlife illustration," she said.

Past award recipients have found work with the Royal Botanic Gardens, museums, the CSIRO, publishing companies and as freelancers.



Graphic design student, Keren Bradley, has been given a head start to a successful career by winning a competition to create the corporate 'look' of a participant in one of Australia's newest and fastest growing industries.

Keren was one of the Faculty of Architecture, Building and Design final year students who submitted work to one of the major players involved in Australia's olive oil industry.

'Hunter Grove' is the brand mark of The Hunter Olive Cooperative Ltd whose members have tree plantings in the Hunter Valley, which make up approximately 10 percent of total current Australian plantings.

Head of the Department and Senior Graphic Designer, Allan Morse said the students were creating the Coop's entire 'look'.

"Everything from the logo on the gates, through to the bottles the olive oil will be sold in," he said. "It's an exercise which not only gives the students 'real-world' experience, but also helps them appreciate the full gamut of design. They learn very quickly that design encompasses everything associated with the visual branding of a company.

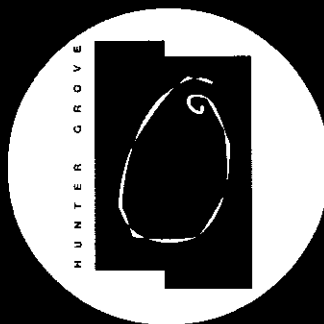
"For example the students are rapidly getting hands on experience of how good design is not just about creative ideas, but creative ideas within a framework, in this case the enterprise's marketing objectives."

The students responsible for the three best designs presented their ideas to Hunter Grove's board on August 16. Keren, whose work was chosen, received a \$5,000 scholarship from the Hunter Olive Cooperative, which includes a working visit to Spain and Italy to examine the olive industry in those countries.

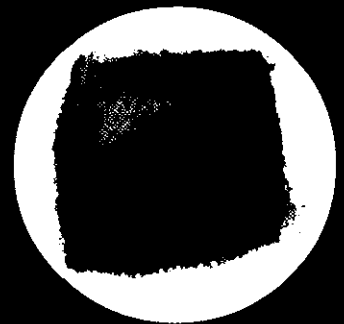
The Cooperative was overwhelmed by the creativity and quality produced by the design students.



Keren Bradley
Winner



Cara Gray
Finalist



Michelle Moore
Finalist

Professor Robert Constable Dean, Faculty of Music

Background

There were quite a few musicians in my family, mainly great aunts and uncles whom I never met, especially on my mother's side. While I appeared to have inherited considerable musical ability, neither of my parents believed it was a suitable profession, particularly for a male. As a consequence, I proceeded to my senior teenage years without having studied music.

I left school at 15 and tried several jobs, including being an agricultural trainee with Yates Seeds. When I was 19, I heard a recording of Rachmaninoff's Second Piano Concerto and made up my mind that my destiny was to play that piece one day! I set about it in a logical way, beginning immediately by practising scales and with a little help from my mother got myself to a reasonably acceptable standard, spending five or six hours a day at the piano.

I also sought out the best piano teacher in

Sydney... Gordon Watson, and he agreed to take me on. He spent two years preparing me for full-time study at the Sydney Conservatorium. During this time I also had to study and sit for my Higher School Certificate to enable me to embark upon tertiary study. I began the diploma course at the Sydney Con in 1970 and had my Teachers and Performers Diplomas, both with honours, by the end of 1973. I played concerti by Mozart and Britten at that time but not the Rachmaninoff. I had earlier vowed to play. I was subsequently offered a full time job teaching academic subjects at the Con - music history, materials of music, as well as conducting - and was there for 11 years. I also studied externally with Durham University during this time and gained an honours degree from there. I transferred to the Newcastle Branch of the Conservatorium in 1984 as Deputy Principal, along with my wife, Elizabeth Holowell who came as the new Head of Strings. In 1994 I was elevated to the position of Dean following

the death of Michael Dudman.

Challenges

The most significant challenge is to maintain a high enough income to the Faculty to fulfil our ambitions. It's clear this can only be done through additional income sources such as full fee-paying students, postgraduate coursework, short courses, etc. It's also important that we maintain and enhance our position as one of the leading Australian music schools.

Another significant challenge is the lack of professional music making culture in Newcastle. We often find that students have no idea of the level of commitment necessary to operate as a professional performer in a highly competitive market place. Newcastle remains dominated by the pedagogical side of the profession rather than performance. We've sought to address that by judicious conjoint appointments including Professor John Harding, concertmaster and co-conductor of the Sydney Symphony Orchestra and

Professor John Pringle of the Australian Opera.

Strengths

One interesting thing about this enterprise is that it's composed of the Faculty serving tertiary students and the Conservatorium Institute for non-tertiary. It's the total enterprise that's important and one without the other is inconceivable. The Institute feeds the Faculty with a significant number of students. We also influence non-tertiary students who decide to study other university disciplines after year 12, to stay in Newcastle so they can continue their music studies at the Conservatorium, including taking music subjects as part of other degrees.

Another strength is the commitment and dedication of our staff and the quality of our programs. Our students are also a major strength and we continue to attract healthy numbers in all areas.

The presence of the Stuart piano adds to our success. It's an example of true symbiosis between research and the practical applications of that



Some of the visiting students at an afternoon tea in the Dean's office to welcome them (and their teacher) to the University

The university's links with Japan were strengthened recently with the visit of a group of students from Newcastle's sister city Ube. Fifteen high school

students from Ube visited the university last month to study English at the Language Centre. The study tour was the first organised jointly by the Ube City Office, the Ube-Newcastle Friendship Society and Seamus Fagan, Director of the Language Centre.

The tour was facilitated by the strong relationship between the university and the Japanese section in the Department of Modern Languages. Tamie Takatsu, Assistant Dean of the Faculty of Arts and Social Sciences and Japanese lecturer, said many of the students expressed the wish to return to Newcastle to undertake longer English courses, to enrol in undergraduate courses and to strengthen their friendships

with the Australian families with whom they had stayed.

Newcastle and Ube will next year celebrate 20 years of their sister city relationship, with Ube planning to send a cultural delegation of more than 100 people.

Dean of the Faculty of Arts and Social Sciences, Professor John Ramsland said the Faculty plans to invite the delegation to the campus. "We hope that they may be able to demonstrate various aspects of Japanese culture, such as calligraphy, music, martial arts, flower arranging and the tea ceremony," he said. "In this way the friendship between the city and University of Newcastle and Ube City will become even stronger."

research. It's ideal for an instrument maker to work hand in hand with performers and should be emulated elsewhere. Our facilities, including our splendid concert hall, are among our leading strengths and we are also very successful in attracting higher degree research students from around Australia and overseas.

Work

I supervise postgraduate students, particularly Honours students. I teach composition and I perform sometimes but not in traditional ways. I'm interested in quirky things, for instance I recently performed two hours of non-stop improvisation to accompany a Buster Keaton film festival. It was terrific fun.

I feel that this is the prime time of my working life. I've spent 20 years preparing for my current role and I work at my job in a way that comes naturally to me. I've got a passion for getting things right and that underpins everything I do. As a performing musician you have to get everything right the first time you perform for the public and

so you practice and rehearse thoroughly to minimise chances of mistakes. I also believe in the relatedness of things that we do - when we're promoting the Stuart piano we're also promoting the Faculty and vice versa. I am fortunate to have staff, particularly the executive team, who share this view.

Leisure

As a young man I was an active athlete. My main passion was cricket and as an opening bowler I worried some notable batsmen. Now, my physical outlets include the occasional game of golf with colleagues and friends and I walk a lot,

particularly around New Lambton Heights where we live. I have a large garden which I have landscaped and planted with Australian natives. I take great pleasure in being the architect of that.

Despite the demands of my job I consider myself a full time parent, particularly to our two youngest children. Elizabeth and I have always made our children a priority and consequently our lives mainly revolve around our work and our family.

Future

The Faculty, with continued careful management, should go from strength to

strength. For me, personally I'm not sure what follows. The Stuart piano continues to need nurturing and I'm very much involved in that development. If we are going to position the piano as a genuine rival to Steinway and others, that task will continue to be a high priority for many years to come.

I have an ambition to spend more time working on my own research, particularly composition and to some extent performing. I'd also like more time to teach and to spend with the students, as well as undertaking leisure pursuits.

Newcastle called on to address chronic shortage

Australia is suffering a shortage of radiation therapists - the people who deliver treatment to half of all new cancer sufferers - prompting the Federal Government to look overseas for suitably qualified professionals, and health departments in several states to consult with universities to help overcome the problem.

Radiation therapists work in consultation with patients and other health professionals to develop and implement radiation therapy treatment strategies for patients suffering malignant (cancer) and non-malignant diseases.

The Faculty of Medicine and Health Sciences has been called on by the NSW Health Department to change its intake of radiation therapy students from every two years, to every year.

"We have known for some time that the vacancies for radiation therapists around the country have outnumbered the number of people graduating with the necessary qualifications," explained Course Co-ordinator in Medical Radiation Science, Shane Dempsey. "Recently the University received a letter from the NSW Health Department, citing

concerns over the state-wide shortage and urging the University to increase its student intake," he said.

The Department has established a Radiation Oncology Workforce Planning Group (ROWPG) involving government and health sector representatives, to consider ways to improve recruitment and staff retention.

The letter reads: *Preliminary staff projection modelling of the workforce, undertaken by the ROWPG, has demonstrated an actual stagnation in potential radiation therapist numbers over the next few years.*

"Provided we can secure valuable clinical experience for additional students, we will certainly endeavour to increase our intake," Shane said. "The situation is made worse by the fact that a degree in radiation therapy is not offered in Western Australia or Tasmania, and soon may not be offered in South Australia."

Currently about 50 percent of all new cancer sufferers have radiation therapy. Both alone and in combination with other treatments it plays an important role in curing many cancers.

Book takes new slant on constitutional law



A book written by a Newcastle law lecturer is set to help students demystify many of the complex issues associated with constitutional law.

Australian Constitution in Context was written by Katherine Lindsay, Assistant Dean (Postgraduate and International) in the Faculty of Law, to serve as a "resource manual" for law students.

"It's a book that's grown out of teaching first year law students," she said, "and it seeks to introduce students to issues associated with the Constitution in a different way."

According to Katherine, an important focus for the Faculty of Law is on trying to develop effective and innovative learning strategies for students.

"I think the book demonstrates that commitment and the Faculty's team approach to teaching and learning," she said. "The book very successfully manages to introduce students to the significance of the Constitution and to the impact which interpretation of that document by the judges of the High Court has had on the lives of all Australians," said Faculty Dean Professor Neil Rees.

As well as being an accomplished author, Katherine has the distinction of being the first graduate from the Faculty of Law.

Geology forum fosters new research

Australia's longest-running forum for geologists to exchange research findings and build the foundations for industry-based practices, was held at the the University at the end of July. The Newcastle Symposium, in its 33rd year, was convened by the Department of Geology.

"To many people, rocks are simply rocks, but to geologists they tell many tremendous stories about the past," explained conference convenor, Emeritus Professor Claus Diessel.

Knowing what to look for also gives geologists the chance to determine the future use in a particular area – whether it may contain mineral or oil deposits and of what quality, for example.

Geologists are also called on to investigate the subsurface in the vicinity of major construction sites and the possible impact of rock mass during mining, and other environmental issues.

"This conference brought together academics from universities and government organisations such as the CSIRO; and industry representatives

from major coal and energy companies," Emeritus Professor Diessel said.

He said the forum provided the opportunity for active and constructive discussion of new ideas and recent research, particularly in the areas of exploration and mining.

However, the scope of the 28 papers delivered during the Symposium was very wide, ranging from the history of geological thought in our region to the identification of air-borne particles.

The Symposium opened with a display of bore cores on Friday, July 30.

The Kenneth George Mosher Inaugural Memorial Lecture was also presented. The lecture honours the highly respected geologist whose career highlights include being Chief Geologist with the Joint Coal Board.

The 33rd Newcastle Symposium, titled "Advances in the Study of the Sydney Basin", was held from July 30 to August 1 in the Geology Building.

No rest during Questacon show

Mike Gore is one science presenter who never puts his audience to sleep!

Professor Gore presented a series of public and school science shows in conjunction with the University in Newcastle from August 19 to 21. The shows were among his last engagements as Director of the National Science and Technology Centre (better known as Questacon).

Associate Professor John O'Connor, from the Department of Physics, said Professor Gore's presentations are quite unique.

"The shows are called 'Sink or Swim', and centre around explaining why some objects sink when placed in various fluids," he said. "Professor Gore is renowned for making his presentations

relevant to his audience and easy to replicate. He also uses many everyday items. For example he might use a beachball rather than some fancy piece of equipment.

"He asks the audience to use their imagination a lot. As he puts it, we can learn a lot by 'thought experiments' and it

helps bring home the reality of the experiment to his audience."

The topics covered ranged from fish to lifejackets, to the Bermuda triangle in a public show held on August 19 in the GP Building and two shows for schoolchildren held in the Richardson Theatre on August 20.



Mike Gore puts on a show for Hunter school children

Port Kembla steelworkers to become teachers

The successful partnership to retrain BHP workers facing redundancy in Newcastle to become high school teachers has led to a similar scheme commencing at BHP's Port Kembla plant.

The agreement, between the University, BHP Port Kembla and the University of Wollongong, means workers from the Port Kembla plant can study to become teachers through the Faculty of Education at the University of Newcastle. The Department of Education and Training has also given its support to the scheme.

Their tuition is funded by BHP as part of a program to find alternative employment for people whose jobs become redundant. So far five people have taken up the retraining opportunity.

The program is innovative with students enrolled through Newcastle but doing some of their studies at Wollongong, some through Newcastle and some with staff at Keira High School. It builds on an arrangement which is enabling fifty-five workers who are facing retrenchment from the Newcastle Steelworks this year,

to retrain as Technology and Applied Studies teachers.

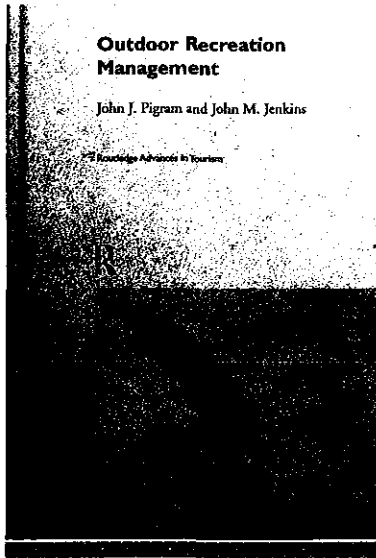
"Teaching today has changed enormously and schools are valuing the life experiences that teachers with industry backing and training are bringing to schools," explained Assistant Dean of the Faculty of Education, Sandra Sirasch.

"Our experience with the Newcastle workers has shown that they are not only suitably experienced, but also very willing to share their expertise. This will make them ideal high school teachers in these fields."

BHP is enthusiastic about the arrangement, according to Ross Funnell, Staff Support Services Superintendent with BHP Port Kembla.

"By working together over several months, industry, higher education and government have demonstrated that favourable outcomes for displaced employees are certainly possible," he said. "The BHP employees undertaking the retraining will bring a wealth of experience to the classrooms of 2000 and beyond."

The importance of recreation



Recreation is as important as work, according to a recently released book on outdoor recreation by a senior lecturer in the Department of Leisure and Tourism Studies. Despite its importance, however, John Jenkins and his co-author John Pigram, are not convinced that societies have moved to a leisured existence.

"Industrialised societies have entered an era dominated by policy and planning ideologies, which support the value of market forces in determining resource allocation and distribution," the preface of the book, *Outdoor Recreation Management*, points out. "This is having a significant impact on outdoor recreation supply and management. Simultaneously, the non-voluntary acquisition of greater amounts of leisure time is a major social problem requiring government intervention."

The authors see coping without work and with an unstructured existence as a difficult process and feel that people from all walks of life should have access to rewarding recreational opportunities.

"The book covers all sorts of recreation in the outdoors from managing playgrounds in parks in urban environments to what goes on in protected wilderness areas and national parks," John Jenkins said. "It is a comprehensive view of the sorts of issues arising in the management of outdoor recreation resources."

Outdoor Recreation Management is a unique international reference book for undergraduate and postgraduate students. It offers an overview of past and present understandings of outdoor recreation research and clarifies the links between leisure, recreation, tourism and resource management. It also considers the future of outdoor recreation and the potential influences of economic, social, political and technological developments.

"I have a fundamental belief that large areas of private and leasehold land should be open to the public through the operation of a system of stewardship," John said. "The problem of recreational access to land is not new but it has become much more prevalent with the growth of urban populations who are looking to escape to the countryside. National parks cannot always be geared to cater to large numbers of people and nor should they be."

John, who came to Newcastle from the University of Canberra 12 months ago, has co-authored three other volumes on tourism and recreation and wrote *Crown Lands Policy-Making in New South Wales 1856-1991*.

Outdoor Recreation Management is the seventh book in the Routledge Advances in Tourism series.

The Millennium Bug - what is it...really?

The University's Year 2000 team has several videos available for you to view either at home or at the Auchmuty library including:

- *Legal Aspects of the Year 2000 Problem*: presented by Tony Deegan from Sparke Helmore solicitors;
- *Year 2000 Made Easy*: preparing your h/w s/w and data – provides a technology perspective with answers to questions about computers and data;
- *Millennium Oz*: an ABC 7:30 Report (4.1.1999) - gives a world-wide as well as a personal view on the risks and possible consequences of the Millennium Bug;
- *The Y2K Bug & your Business* – prepared by the NSW Department of State & Regional Development to show how a business could be affected by the Y2K bug.

National infrastructure - is it ready?

On the 19th August the Federal Government held the NSW focused National Infrastructure forum to discuss the progress on Year 2000 work. In summary, EVERYTHING IS FINE, just about.

Most large companies and government are meeting the deadlines (government is 91 percent compliant). Some departments have sought to push back the completion dates.

Overseas does not look so good especially for our neighbours in SE Asia, China and Japan.

Below are some figures for specific areas of infrastructure:

1. Electricity: 99.98 percent supply reliability and are Y2K ready but no guarantees.
2. Water: 100 percent ready in operation and

business systems, still working on the non-critical stuff.

3. Telecommunications: varies from 88-98 percent compliant with work including contingencies to finish by 31/10. Have spent over \$500,000,000 so far. We should expect phone congestion between 11pm and 3am New Years Eve.

4. Banking: 100 percent ready, now testing contingency plans. Together they have spent over \$1,000,000,000 this decade.

5. Fuel: 100 percent of critical processes are ready with contingency plans being developed. There is >two weeks supply in the supply chain which is to be increased to four weeks for the Christmas period. Selected petrol stations will have independent services and so can supply fuel regardless of power, water etc.

6. Aviation: lots of electronics but almost no date dependencies on the planes thus after extensive testing the larger airlines are confirming Y2K compliance. Airports are very complex but most systems are nearly Y2K ready.

Finally Small/Medium Enterprises (SMEs) are seen as the big risk areas and the government is targeting them now.

Staff are reminded that the Project Team have a PC available for testing applications and data. Software is available to assist in fixing various data problems such as MS-Access databases and MS-Excel spreadsheets. For more information please check out <http://www.newcastle.edu.au/y2000> or contact the Year 2000 Service Centre, email: y2000@newcastle.edu.au, ph ext 5847, fax ext 6988.

Internet Traffic Usage and Costs

Many University staff and students have access to the Internet - either on-campus or off. The costs of providing Internet access have been met by the University. However, the rapid uptake of the Internet as a resource for research, teaching and learning, plus ever-increasing recreational use have pushed these costs beyond that which the University can sustain.

Internet traffic is currently charged at two different rates. For overseas Internet sites the cost is around 14 cents per megabyte, while domestic and other AARNet sites cost around 2.5 cents per megabyte. A megabyte is roughly one million characters, and is equivalent to what you can download using a 28 kilobits/sec modem in about 6 minutes.

The chart below shows the monthly Internet traffic costs from January 1997 until July this year. Prior to the introduction of the high speed microwave connection in March 1998, Internet access was contained to some extent by the low-speed link running at maximum capacity. Since then, however, Internet traffic costs have risen from about \$26,000 per month to \$67,500 per month in July 1999.

To help alleviate the situation, a study of Internet usage patterns for both staff and students has commenced. The outcome from this study will formulate a scheme for recovering costs beyond the level that the University will fund. In conjunction with the introduction of these measures, a revised policy on acceptable Internet access for staff and students will be available.

What does this mean for University Internet users? For students, it will be the

introduction next year of cost-recovery for Internet use in excess of a pre-determined coursework quota. For staff members, departments, faculties and divisions, costs may be recovered from a funding allocation - just like the current telephone usage cost recovery.

Tony Nicholson
IT Infrastructure Program, IESD.

Customer Satisfaction Workshop

On 6th August, staff of the Statistical and Evaluation Services Unit of IESD conducted a very successful workshop at Noah's on the Beach. Titled *Measuring Customer Satisfaction*, the one-day workshop brought together fifty participants from almost every level of enterprise, including Local and State Government, tertiary institutions, manufacturing industry and small business. With assistance from current external clients and other IESD staff members, the unit showed participants how to choose the most appropriate survey method, design a professional questionnaire, analyse and present the data and use the results to enhance business opportunities. Feedback from participants was extremely encouraging and staff are

looking forward to repeat performances in the future. Special thanks to Bruce Leaver, Linda O'Brien and Bob Wiltshire from IESD for their valuable assistance and input.

Evaluation of Subjects and Teaching

Academic staff are reminded about the Student Evaluation of Subjects and Teaching processes for Semester 2. Information about these two important measures is being sent to all departments from Wednesday 25th August. Further information can be obtained by contacting **Julie Stephens** on x5381 or **Margaret Stevenson** on x6522.

Lunchtime Seminars at the Auchmuty Library

Each month IESD holds a lunchtime seminar - a forum for the communication of current issues, topics of concern, or on new activities, information or procedures.

The forthcoming seminar will be Call Tracking, the new Clientele system which will record, organise, document, and keep track of requests for service, including Faculties that have Service Level Agreements with IESD. Call Tracking will be managed by the Client Services and Infrastructure Programs. This Seminar will be presented by Alison Rigby in

the Audiovisual Theatre of the Auchmuty Library on 22nd September, 12.00 noon - 1.00pm.

Learn Microsoft Word 97 at your own pace

In IT Training, we realise that people learn in different ways, and that being led through course material by an instructor may not be your optimal learning experience. We are now offering Microsoft Word Flexible Learning days designed so that you may work through a particular module at your own pace. There will be a training consultant in the room at all times if you require assistance.

The modules you can do through flexible learning are:

- In The Beginning
- And We Created
- Tables
- Merging
- Time Saving Features
- All There is to know about Graphics
- Automating & Customising Your Tasks

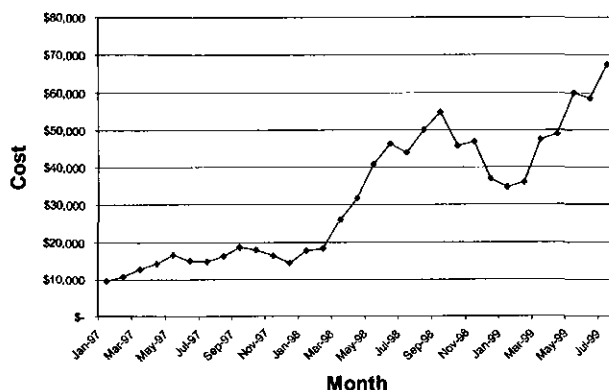
The scheduled dates for the flexible learning days are: 1 and 24 September 1999; 15 and 29 October 1999.

There will be two separate time slots: 9am - 12pm and then 1pm - 4pm. You are still required to book into these sessions. Please advise Faye McMillan on ext 8634 which module/s you are intending to tackle to ensure that we have enough manuals and computers available.

We are endeavouring to address the needs of our clients. We will offer these courses in the traditional manner, as well as flexibly. We look forward to seeing you at our flexible learning sessions!

Jenny Piercy

Internet Traffic Costs



For sale

Hamilton - two bedroom w/board and iron cottage. Polished boards, spacious living areas, separate dining, renovated bathroom, galley kitchen. Newly painted throughout, with nice gardens on a 400sqm block. \$139,000. 143 Lindsay St. Phone Tim Dolin 5176.

1991 Subaru Liberty LX (red), front wheel drive, power steering, air conditioning. One owner. Very good condition. 121,000 kms. \$11,950. Ph 4921 4268.

Power cuts

PPE conducted a one minute shut down of power to most Callaghan campus buildings at the beginning of August to perform an essential safety check. It allowed preliminary information for future upgrades of the electrical infrastructure to be gathered.

Power outages are only conducted when there is no other safe or practicable alternative. PPE regrets the disruption that power interruptions cause to equipment and experiments and appreciates the cooperation of the University community. The outage identified a number of items requiring immediate attention.

The growth of the campus has meant that our power distribution network is approaching its limit. In order to assure a reliable power supply, it is essential that PPE take a proactive approach. There will be preliminary works this year followed by works at approximately six monthly intervals over the next three to five years.

Works this year will be as follows:

- power outage McMullin Building - rectification of faulty isolation switch;
- power outage residential precinct - rectification of faulty isolation switch;
- each building on the Callaghan campus will require a single power outage lasting 2-8 hours in duration for installation of monitoring equipment in substations and further essential maintenance works.

Because of the developing scope of the works and requirements for outages to suit both departmental and construction project needs, a detailed program of works would not be accurate or meaningful. However the following provisions have been made to notify you prior to outages:

- first notification three weeks in advance - coordinate with contact person;
- second notification three working days in advance;
- telephone notification by arrangement just before the outage.

If you have any special needs (or feedback from the previous outage) please contact John O'Donohue on ext 6509. We look forward to working with you to upgrade our power system with the minimum of disruption.

'Express post' box

An Australia Post "Express Post" gold mail box has recently been installed adjacent to the red mail box at the University Union's Shortland building for the receipt of Express Post envelopes, satchels, etc.

This facility allows for the urgent dispatch of express mail with Australia Post, and comes with their guarantee for next

business day delivery of documents, letters and parcels to most provincial centres and major capital cities (excepting Darwin).

The gold mail box is cleared each week day at 6pm. Envelopes, satchels etc for this special service can be purchased at the postal agency in the Shortland Union building or ordered through COS.

Lloyd Scott service

Lloyd Scott Printery is pleased to announce the appointment of Allan Dillingham as the Account Manager for the University's printing requirements. Allan brings to the role a new level of enthusiasm with a strong focus on attention to detail and to improved customer service. Over the next few months, he will make contact with as many Department and Faculty personnel as possible.

Please call Allan on ext 6688, ph 4969 4888, mobile 0408 119 282, fax 4969 4965 or email: adillingham@lloydscott.com.au. * Please note that all promotional materials should be negotiated through Marketing and Media Services (ext 5594) and not directly through Lloyd Scott.

Career Moves - Valuing Skills, Planning Futures

This program is for women in clerical, secretarial and administrative positions (levels 2-5). It comprises two one-day workshops, spaced four weeks apart to allow participants time to complete a workbook on career planning. The workshop helps you to identify and value the full range of tasks and skills involved in your work and reflect on your work prospects, plan your next steps and identify the support you need. Career paths may go sideways as well as upwards, so the

program will give you ideas on increasing your options in different work areas even if you don't want promotion.

Workshops will be presented by Vincia Martin and Kerrie Tapp, Fair Work Practices on Wednesday 6 October and Wednesday November 3. To register contact Faye McMillan, ext 8634 or email learndev-bookings@newcastle.edu.au to reserve a place. For further information contact: Vincia Martin, Fair Work Practices, HRM Branch.

Maxwell Ralph Jacobs Grants

Applications are invited for the 2000 Maxwell Ralph Jacobs grants. Sponsored by the Australian Academy of Science with the Institute of Foresters Australia and New Zealand, the grants supports forestry research projects. Applications close on September 30 and should be directed to The Executive Secretary, Australian Academy of Science, GPO Box 783, Canberra ACT 2601, or email ac@science.org.au. Forms can be downloaded from www.science.org.au/awards/awards.htm.

ISE Cards

A travel card offering medical insurance, a travel assistance service and discounts on accommodation, food and transport in America and 25 European countries is now available in Australia. The ISE (International Student and Youth Exchange Identity) card is available to students and faculty staff for \$15 and is valid from the date of purchase until March 31 of the following year. It is available from flight centres, student travel centres, Great Holiday Escape and Premium Sport Tours. For details phone Graham Piercey on 03 9874 7999.

17 September

Graduation ceremonies at Callaghan Campus

19 – 22 September

Annual Regional Science Association International Conference on the theme of regenerating regional communities. Contact Dr Moira Gordon, Conference Coordinator, 4963 1308.

20 - 22 September

Clinical Skills in Men's Health - Healing men in practice. Contact Family Action Centre – Richard Fletcher, ext 6401.

23 - 24 September

The Employment Studies Centre is hosting the 6th National Conference on Unemployment at Noahs on the Beach in Newcastle. The theme of the conference is Jobs, Policies, Markets and the Future of Work. Inquiries to Linda Cooper, Conference Organiser, email: mglmc@cc.newcastle.edu.au.

26 - 29 September

Chemeca 99 organised in conjunction with the host organisations of The Institution of Chemical Engineers, The Institution of Engineers, and The Royal Australian Chemical Institute.

27 September

1999 NSW Tertiary Counsellors' Conference held at the Central Coast Campus. Contact the University Counselling Service on ext 5801.

30 September and 1 October

The 1999 Australian Symposium on Combustion and the Sixth Australian Flame Days, contact: B. Dlugogorski, email: cgbzd@alinga.newcastle.edu.au

25 - 26 October

4th annual Inter-Cultural Studies conference hosted by the Department of Modern Languages. For more information visit our website <http://www.newcastle.edu.au/department/lg/conference/index.html>

18 - 20 November

2nd International Conference on Managing Enterprises - Stakeholders, Engineering, Logistics and Achievement (ME-99).

22 - 24 November

The First Australian Family Strengths Conference, Callaghan campus

Consultation on student system

A steering committee established to select a new student administration computing system will consult extensively with a range of university staff before making their decision.

The Student Information System Steering Committee, chaired by Deputy Vice-Chancellor, Professor Brian English, will hear the views of a number of reference groups who have been part of the consultation process. Manager of the Student Administration Unit, Gail White, said that most Australian universities had been through the process of upgrading their student systems in the past couple of years.

"Many of them need to make their systems Year 2000 compliant but we don't have that problem with ours," she said. "NUSS is compliant but isn't flexible enough to be able to support the things the university wants from a student system."

The sort of things the existing system can't do is track enquiries for marketing purposes, allow for flexible delivery of courses outside the current semester set up, or cope with the complexities in enrolment that are generated by courses being offered offshore or by those tailored to suit industry needs.

"At the moment there are little satellite systems springing up around

the university that don't relate to each other," Gail explained. "Ideally we need a system that is only updated in one place and that supports the diversity in course offerings and additional requirements of the university."

Most universities are choosing between three systems that are currently on the market:

Callista from Deakin Software Sales; Student One from the same stable as the Finance One system and sold by Technology One; and the student administration system offered by PeopleSoft. Each of these firms has been to Newcastle to give two-day presentations on their software to a range of reference groups. The groups include representatives of academic, general and administrative staff from across the university.

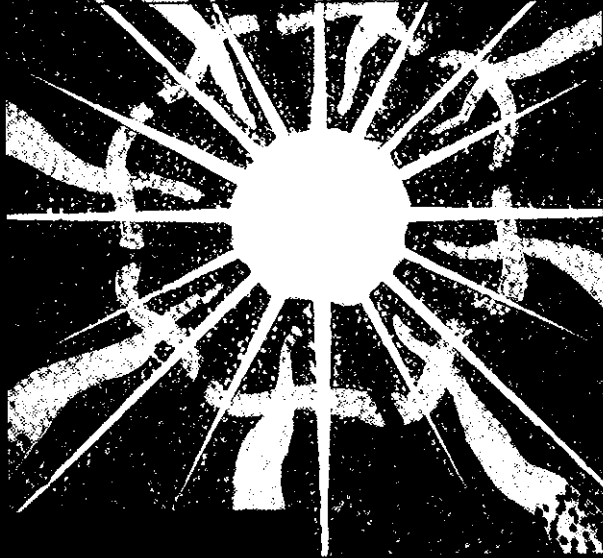
The Steering Committee will consider all the information before making a selection by November. The system will be implemented as soon as possible after that and may be used to admit students in 2001. The university has advertised for a project manager to assist in the selection and implementation of the system, Gail said. Six or seven administrative and technical people on a project team would assist the manager.

Welcome to new staff

Uninews would like to welcome new staff to the University in this column each month: The following people have been appointed in July and August:

John Attia - CCEB, Jenrifer Booker, Ann Hall and Douglas Brattan - Information Resource Centre, Glenn Bryant - HRM, James Christian - Estates and Services, Margaret Florey - School of Humanities, Barbara Geale - Faculty of Nursing, Rosalind Halton - Department of Music, Pak Lee - School of Business, Alison Lord - School of Humanities, Michael Marriott and Tina McCaffrey - Information Resource Centre, David McDonald - Director's Unit, Wendy Michaels - School of Humanities, Salim Momtaz - School of Science and Technology, Phillip Peterson - Kibalee Aboriginal and Torres Strait Islander Learning Centre, Alistair Ramsay - School of Biomedical Sciences, David Rogers - Development Unit, Anthony Ryan - Marketing and Media Services, William Schaffer - Department of English, Maria Schreider - School of Science and Technology, Peter Searle - School of Humanities, Julie Taylor and Carol Turner - Information Resource Centre, Chareen Unsworth - Faculty of Tourism and Hospitality, Anthony Walker - School of Science and Technology, Peter Whiteman - School of Humanities, Monte Wynder - School of Business, Minjie Zhang - Department of Computer Science and Software Engineering, Kerrie Carmichael - Research Branch, George Franks - Department of Chemical Engineering, Krichelle Gardner - Enabling Programs Unit, Simon Lane - Department of Biological Sciences, Ann Lindner - School of Biomedical Sciences, Peta Moore - Marketing and Media Services, Richard Olde - Financial Services Unit, Mardi Ryan - Development Unit, Vanessa Lamb - Director's Unit, Kerrie Wilde - School of Science and Technology.

WIZARDS OF OZ



Wizards of Oz Recent Breakthroughs by Australian Scientists

Peter Spinks, 1999
Allen and Unwin

by John O'Connor*

Australia has made great advances in science and technology in the past and we currently contribute about two percent to the annual increase of knowledge. The real question is whether we are still making advances which are leading edge and capable of generating new technologies, or are they just 'interesting' in an academic way.

The purpose of this book is to highlight recent advances in science and technology to reassure us that there is still quality in the product. There is a brief and incomplete review of some of the past achievements with a few surprises. Did you know that the latex glove, rotary hoe, self-sharpening knife, wine-dispensing casks, 'Black Box' flight recorders

and the aircraft slide raft for emergency landings are all Australian inventions? There are many more in the book and even still more not listed.

The introduction sets the context by outlining the changes in research funding, number of graduates, international prizes won and some OECD comparisons. With the aid of a number of scientists as consultants, Spinks has addressed the recent discoveries, placed them in context and explained them in ways that non-scientists can understand. He has taken as his primary source the stories that he has encountered working as a science-writer and journalist. This means that there are no medical matters covered as it did not come under his normal area of work.

There is a wealth of examples involving astronomy, geology, biotechnology, fire control, meteorology, environmentalists and materials. In each case there are several examples of recent discoveries affecting different areas of life. The structure of the book is that within each chapter there are one to two pages devoted to a recent discovery or technological advance. For those areas which need some background support, an informative article is included to bring the reader 'up to speed' using everyday language.

The advantage of this book is that it is not written by a scientist so that the level of knowledge to appreciate the findings is not demanding and it is topical in that it has come largely from a database of recent stories. On the other hand, the coverage is not uniform and I suspect it relates to the support the author received in gaining background material. Some topics which I found very interesting received only the 'newspaper story' coverage, while other articles were pitched more at the 'colour supplement' level.

This disparity also showed itself in the size of chapters with the chapter on astronomy taking up 20 percent of the book. While this is an important aspect of

Australia's discoveries in science, having it as the third chapter did make it an early hurdle to overcome before getting into more diverse range of material. Against this is the scarcity of examples related purely to chemistry which I found of concern given Australia's advances in this area.

Australians have demonstrated in a number of surveys that their interest in science and technology is very high and that their pride in Australia's achievements in these areas is one of the highest in the world. It is to this audience that this book is pitched and it will be a great read for anyone who either wants 'ammunition' when talking about Australian science or for anyone who is sceptical of Australia's ability to compete successfully at an international level. Despite its faults it is worth buying and as it is supposed to be the first in a series of books on Australian science for the non-specialist it will be equally interesting to see what follows.

**A/Professor John O'Connor is a lecturer in the Department of Physics*

unibriefs

Democrats leader, Senator Meg Lees, has announced an eight percent textbook subsidy for students, in a \$240 million books GST compensation package negotiated with the Howard Government. The package is expected to help authors, printers and students.

Reliving blast off

Local astronomer and academic Dr Colin Keay was

part of the official press corps who witnessed the blast off of Apollo 11 from Cape Canaveral 30 years ago. He relived his memories and images at a special lecture/presentation for the Newcastle Astronomical Society on July 30. According to Dr Keay, nothing could compare with the feeling of being there - "the combination of sight and sound was truly electric".

Helen of Troy, one of civilisations' earliest heroines, has endured through the ages. Her changing depiction in ancient history was examined in a lecture at the University last month. The lecture was presented by the Department of Classics in conjunction with The Australian Archaeological Institute at Athens. Professor Alan Shapiro, Professor of Classics at The Johns Hopkins

University, delivered the lecture as part of a national tour.

Leisure and Tourism Studies lecturer, Kevin Lyons, has a hidden talent. Patrons of the Beaches Hotel in Merewether might have seen Kevin playing harmonica in a guest spot with local band 'Extreme Blues' in July. Our spy says he was so good the band asked him back for the last song of the night!